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## NEWS IN BRIEF

Renmark (S.A.) has become an air port. There was much enthusiasm at the recent opening ceremony.

At the recent field day at Kyabram, Vic., the manurial tests caused great interest.

In its Sixth Annual Report, the W.A. Apple Sales Board makes favorable reference to the good work of the Australian Apple and Pear Export Council.

The Western Australian Apple Sales Board has completed six years of effective service to growers.

By organised marketing and advertising a valuable piece of community service has been achieved.

Bartlett, Duchess or Williams Pears also come under the aegis of the Board.

It is expected that there will be a resumption of the Interstate Apple and Pear Grading Regulations Conference at Sydney early in July.

In Palestine there has been a big increase in the production and export of Oranges.

Mr. T. Peart, factory manager of the Shepparton Cannery, is leaving for a visit to U.S.A. in June, to ob-

serve the latest methods in fruit processing.

Mr. A. R. Townsend, Chairman of the Fruit Industry Sugar Concession Committee, is at present in London. Matters of policy concerning many Australian products are now under discussion.

### ADVERTISING IN U.K.

An excellent advertisement in the form of a Cookery Book Calendar was received from Mr. A. E. Hyland, Director of Australian Trade Publicity in London. This much appreciated booklet contains recipes for the various meals of the day, and in each recipe emphasis are laid on the necessity of using Australian products to secure perfect results.

## PERSONAL

Sir David Rivett, Chief Executive Officer, Council for Scientific and Industrial Research, left for a visit to England at the end of May to examine matters connected with co-ordination of research programmes.

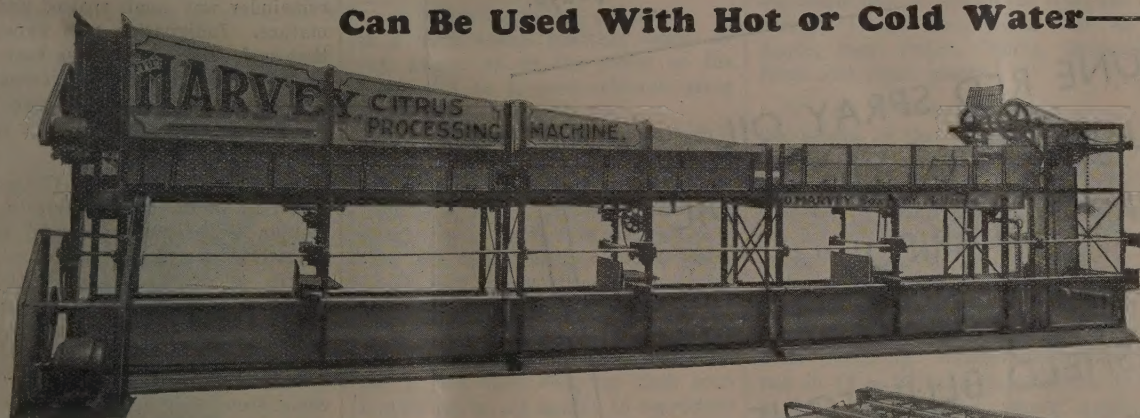
Mr. E. N. Robinson was recently appointed the co-ordinating officer of the Dept. of Commerce, to correlate the fruit export conditions in the several States, and to assist in the uniform interpretation of the export grading regulations.

Mr. L. J. Cleary, of the Aurora Packing Company is now en route to England, and part of his time in London will be devoted to the supervision of the sales of the company's early shipments on the British market.

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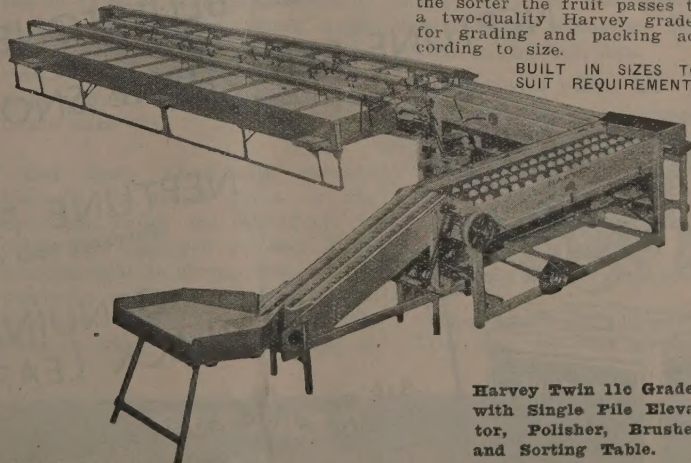
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### IMPERIAL FRUIT SHOW.

Liverpool, October 30 to November 7.

The Imperial Fruit Show and Canners' Exhibition will be held at Liverpool from October 30 to November 7, 1936. The closing date for entries is August 22.

There are sections for Apples and Citrus Fruits grown in the British Empire, also a Canned Produce Section, in which all produce shown must be grown and packed in any part of the British Empire. Fruits included in this section are: Plums (Red, Damson, Victoria, Yellow pershire), Peaches, Apricots, Pears, Apricots, Pineapples, Grapefruit, Guavas, Mangoes, Litchies, Raspberries, Loganberries, Strawberries, Blackcurrants, Cherries, Gooseberries and vegetables are Peas and Beans and Carrots.

Australian entries close with the Dept. of Commerce, 419 Collins-street, Melbourne, on or before August 22, 1936.

### PERSONAL—(Continued).

Mr. F. Head, of Wildridge and Sinclair Ltd., Sydney, whose refrigerating machinery is installed in numbers of fruit cool stores, has returned to his office after a two weeks' vacation at Kurrajong. Though past the allotted span, Mr. Head can still sit a horse as to the manner born.

Mr. G. W. Brown, President Victorian Fruit Marketing Association and delegate from the Australian Apple and Pear Export Council to the Empire Fruit Council at London, addressed large meetings of growers at Pakenham and Harcourt in May.

Resolutions were carried endorsing the policy submitted by Mr. Brown.

### NEW MANDARIN.

Promising Variety from Algeria.

The Clementine variety of Mandarin imported five years ago by the N.S.W. Dept. of Agric. from Algeria, is showing considerable promise, according to a report by Mr. R. J. Benton, Special Fruit Instructor, N.S.W. Dept. of Agriculture.

### TASMANIA.

At the recent election for Southern members of the Tasmanian State Fruit Board, Mr. D. E. Ryan was re-elected, and Mr. E. Norris replaced Mr. T. A. Burnaby, after a very close vote.

Mr. L. S. Taylor was returned unopposed for the North.

At its May meeting the Tasmanian State Fruit Board inspected samples of Apples submitted for export, and recommended that the grower be prosecuted; some of the fruit was eaten away with grubs and decay, and the remainder was small spotted and immature. Indignation was expressed that such fruit should have been sent to the wharf for export overseas, as the general tone of Tasmanian fruit exported is certainly of a high standard.

### Interstate Consignments Criticised.

Mr. B. O. Plummer, formerly Tasmanian Government growers' representative in Sydney, issued an emphatic report, severely criticising some of the Tasmanian fruit sent to Sydney. There was full justification for such as had been rejected; it was a disgrace to Tasmania. This fruit came from only a small section of growers, but it did untold harm. However, there was no need for pessimism, as with organisation and advertising Sydney could absorb an additional 250,000 cases of Tasmanian fruit.

Mr. Plummer recommended that the Sydney panel of agents to sell Tasmanian fruit should be reduced to 15.

### NEWSPAPERS AND PERIODICALS

To ensure transmission through the post, full postage must be prepaid. The Postal Dept. asks citizens to note that postage on newspapers weighing between 4 and 6 ounces is as follows:—To Australian and N.Z., 1d.; to U.K. via France, 2d.; to U.K. via All-sea Route, 1d.; to other British Possessions, 2d.; to U.S.A. and Foreign Countries, 3d.

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# Spraying for Insect Pest and Disease Control

## Winter Control Measures for Fruit Tree Pests

San Jose Scale - Apple Mussel Scale - Red Scale  
Vine Scale

(By Keighley M. Ward, Asst. Entomologist, Vic. Depart. of Agriculture.)

[Reprinted by courtesy from the "Victorian Journal of Agriculture."]

**A**LTHOUGH next season's crop of all deciduous fruits as yet exists only in an embryonic stage in the buds, the present is the time to commence the attack on the insect pests which threaten that crop. The object of this article is to place before fruitgrowers information on some of the more recent developments in Winter control measures and to assist them to destroy these pests for the coming fruit season.

Following are the principal scale insects which can be dealt with during the Winter.

### Scale Insects.

**San Jose Scale** (*Aspidiotus perniciosus* Com stock).—The fruit trees from which the San Jose scale has been recorded include Apple, Pear, Quince, Citrus, Peach, Plum, Cherry, Grape vine, Almond, and Olive. Common alternate hosts are Acacias and Eucalypts. Apple and Pear trees suffer the most severe economic damage, while, on other fruits, the pest is of secondary importance only.

The insect is of very considerable economic importance. The first factor contributing to that importance is the rapidity with which it can breed and become so heavily encrusted on a tree as to seriously stunt its growth, throw it out of production, and ultimately to cause its death. In a single season a score or two of the scales can multiply to such an extent as to

cover completely the branch of a tree.

A second factor is that no fruit which bears any of the scales is allowed to be sold in the local market nor can it be exported.

Thirdly, there is always the chance that the insect will become better adjusted to feeding and breeding on fruit trees other than the Apple and Pear. Winter spraying was first made necessary in certain parts of U.S.A. about 35 years ago because of the prevalence of San Jose scale in Peach orchards, large numbers of which have been completely destroyed in that country.

The insect passes through the Winter on fruit trees as a partly grown form under the protection of a waxy scale.

No over-Wintering eggs are produced as is the case with many other insects. Satisfactory control of the pest is not very difficult to achieve.

Departmental orchard tests have shown that spraying during the dormant period of the fruit trees with either Lime-sulphur (1 gallon in 9 gallons of water) or Red Oil (1 in 15) will check the insect. Where infestation is very heavy two sprayings are often necessary. If lime-sulphur is to be used after red oil a month should elapse between the two applications.

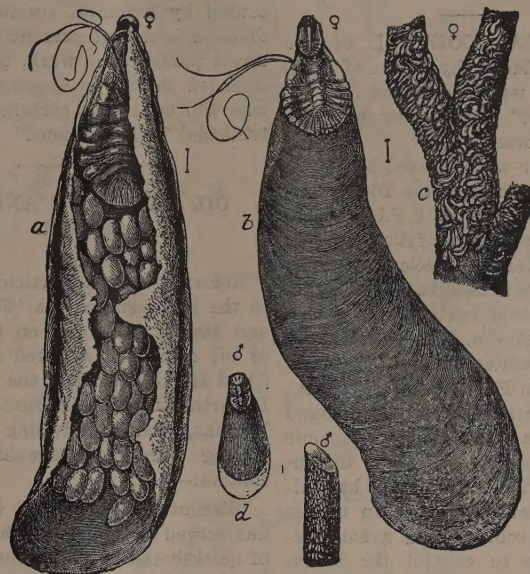
### Spraying before pruning

is a very sound practice, since, by this means all of the scales on the trees will be treated without using extra spray material.

It is difficult to decide whether either of these two sprays has an advantage over the other. With lime-sulphur a lasting coating of the material is left on the tree and this protects the tree from any young scales which may emerge from those adults that escape the treatment.

Sometimes sprayed scales survive the treatment and develop to maturity, but it has been observed that such female scales are unable to reproduce as they are apparently rendered sterile by the lime-sulphur (1).

It has been noticed in U.S.A. (1) that the hairy nature of terminal growths on some varieties of Apple and Pear prevents lime-sulphur from properly coating them. Thus, scales on this portion of the tree are not always destroyed, and in Spring young scales congregate on them and on the fruit. In such cases it may be preferable to use red oil, or to follow lime-sulphur by red oil.



Mussel Scale enlarged showing—(a) female scale from beneath, filled with eggs; (b) same from above; (c) female scales on a twig; (d) male scale and infested twig.

Where red oil only is employed a quicker kill can be expected. Whichever of these treatments is adopted the success of the treatment will depend mainly on the thoroughness of the spray application.

Supplementary control measures are the destruction of all prunings and of infested wattle and eucalypt trees.

:: :: ::

**Apple Mussel Scale** (*Lepidosaphes ulmi* L.).—This is also known as the Oyster-shell Scale. While the insect is not considered to be as serious a pest as San Jose scale it occurs very commonly in Apple and Pear districts in this State and causes serious enough injury to those fruits. It usually lives on the bark of the tree, but sometimes occurs on the fruit and leaves. It has been found here on Apple, Pear, Peach, Cherry, Quince, Plum and other plants.

### As Winter approaches

the adults of the insect usually die, but the waxy scales under which they lived remain attached to the bark of the tree. Underneath these scales the insects leave behind them great numbers of minute whitish eggs in which stage the species usually over-Winters. Unless the eggs are destroyed by suitable spraying they will hatch in Spring. Effective sprays are red oil (1 in 25) and lime-sulphur (1 in 10). In England, where Apple Mussel scale is very abundant, the most effective treatment is considered to be a Winter spraying with tar distillate wash (2).

:: :: ::

**Red Scale** (*Aonidiella aurantii* Maskell).—In recent years in the Goulburn Valley the Red Scale of Citrus has appeared on Pear trees growing near to citrus trees, and on numerous occasions the insect has been found on the fruit. Other fruit trees on which it has been found in

this State are Apple, Walnut and Grape vine. While Red Scale infestation of Pears has not assumed serious proportions, the presence of the scales on fruit is sufficient to make the sale or export of the fruit illegal. If unchecked the scales will lower the health of the tree.

### Red Scale

#### over-Winters on Pear trees

either in the adult or partly-grown stages. There are no over-Wintering eggs as with Mussel Scale. Lime-sulphur and red oil used in Winter at the strengths recommended above will satisfactorily control the insect on Pear trees.

:: :: ::

**Vine Scale** (*Eulecanium persicae* Fab).—The vine scale occurs on Grape vines, Apple, Plums, Peach, Quince, Fig, Red and Black Currant, Raspberry, and Loganberry. The adult scale is about 1/4 inch in length. The scales are always most prevalent on the older wood and if left unchecked they become very heavily encrusted there. Sometimes the insect is found also on the young wood and leaves. There is only one generation of the insect in a season. In the Summer months the species produces large numbers of eggs which give rise to young scales and these latter over-Winter in an immature stage of growth on the fruit tree.

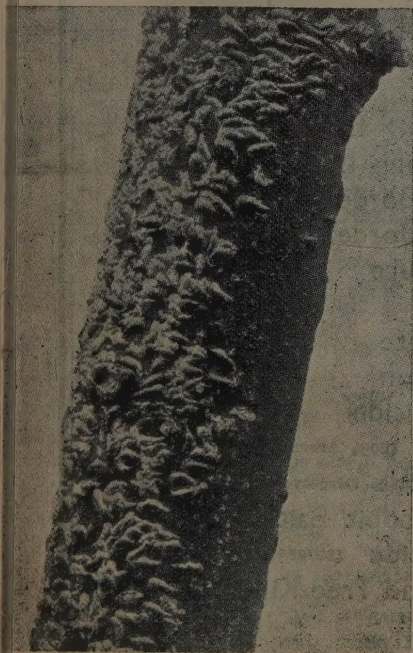
On deciduous plants the pest is readily controlled by a dormant period spraying with red oil applied at a strength of 1 in 20.

Overheard on the beach: "Mummy, may I go in for a swim?"

"Certainly not, my dear, it's far too deep."

"But daddy is swimming."

"Yes, dear, but he's insured."



Part of branch infested with Mussel Scale. (Blocks courtesy Vic. "Journal of Agric.")

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### THE CODLIN MOTH PEST.

#### Control by Parasites Not Achieved. Experiments with Non-Arsenical Sprays.

**B**IOLOGICAL CONTROL of the Codlin Moth (by means of parasites) was mentioned in the "Fruit World" recently by a South Australian correspondent.

This matter was referred to Dr. A. J. Nicholson, Chief of the Division of Economic Entomology, C.S.I.R. (Canberra), who replied as follows:—

"Many different species of parasites are known to attack the codlin moth in different parts of the world, including Australia. Extensive studies of these parasites have been made, particularly in Europe and the U.S.A., but so far no species has been found to exercise a satisfactory economic control. When one considers the intensity of the search that has already been carried out in an unsuccessful endeavour to find a satisfactory parasite to control the codlin moth, it seems highly probable that this pest cannot be controlled by the use of parasites.

"In this country efforts are being directed mainly towards the discovery of a more satisfactory spray

schedule than that generally in use at the present time. In particular, investigators are endeavouring to find satisfactory non-arsenical sprays in order to overcome the difficulty presented by arsenical residues. This division is not at present taking any direct part in this work, though it is intended shortly to appoint a chemist who will undertake certain special insecticidal investigations."

#### OIL EMULSIONS AND RED SPIDER.

Referring to the article published in the last issue of the "Fruit World and Market Grower," on the subject of oil emulsions and red spider, the Chief Horticulturist of the Tasmanian Department of Agriculture, Mr. P. H. Thomas, writes advising that the closing paragraph should read as follows:—

"Recent research work in America has served to emphasise the efficiency of quick-breaking emulsions. In other words, it is not always the oil emulsion which mixes most easily with water that provides the best control, or that remains longest on the tree covering the eggs with an effective film."

## MOTTLE LEAF OF CITRUS

Due to Many Causes, and can be Cured by Correct Soil Management.  
Importance of Green Manuring — Tests in South Australia.

Mr. A. G. Strickland, M.Agr.Sc., referring to mottle leaf of citrus, states that this disease occurs in all countries where citrus is grown, but, owing to the many different factors which have been shown to contribute to the condition, the questions of cause and control cannot be answered in a general statement.

In every instance the trouble is due to faulty nutrition, but the respect in which nutrition is faulty need not necessarily be the same in all cases, and, furthermore, the factors which bring about unbalanced feeding of the tree may also vary.

Among the many possible explanations of mottle leaf in citrus are insufficient nitrogen, excessive nitrogen, lack of humus, deficiencies of certain elements (such as zinc), or the presence of toxic minerals (such as Lithium or Boron) in soil, or irrigation water.

In respect to the last mentioned explanation, one serious outbreak of mottle leaf in California was traced to soil contamination with drainage

from a fruit washing plant using the borax treatment.

In other cases occurring in America mottle leaf has been successfully corrected with heavy dressings of iron sulphate. More recently it has been shown that the beneficial results derived from iron sulphate were due to zinc impurity in the iron sulphate employed.

At present experiments are being conducted with dressings, injections, and sprays of zinc sulphate. The treatments have shown promise, but are only in the experimental stage, and in many instances have resulted in serious tree injury.

Messrs. Samuel & Piper have found gray-speck disease of oats occurring in South Australia to be a manganese deficiency disease, and have suggested that mottle leaf may be in a similar category. Confirmation or otherwise of this suggestion rests in an attempt to grow citrus in the complete absence of manganese, and is being done by

(Continued on page 7.)

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# THE CONTROL OF BLACK SPOT IN PEARS

## Success with Weak and Strong Sprayings with Bordeaux

By P. H. Thomas, Chief Horticulturist, Department of Agriculture, Hobart, Tas.

FOLLOWING the severe infestation of Black Spot (*Venturia pirini*) on Pears experienced in Tasmania during the 1934-35 season, numerous requests were received by the Department of Agriculture as to the best control spray programmes to adopt. Bordeaux applications were favorably recommended, and in order to demonstrate the efficacy of this spray and test the different strengths, an experiment was arranged by special request in the Sandford district on Mr. O. Calvert's property. A portion of this orchard had been seriously affected by Spot for some years, and was therefore selected for the purposes of the test.

The two susceptible varieties, Beurre Bosc and Winter Nelis, were chosen, and the following programmes adopted:—

Spray.	Period of Application.	Date.
1. Bordeaux 6-4-40	"greentip"	28th August.
6-4-40	"pink"	11th September.
4-4-40	"Calyx"	8th October.
2-2-40		8th November.
1½-2-40		10th December.
1½-2-40		15th January.
2. Bordeaux 4-4-40	"greentip"	28th August.
4-4-40	"pink"	11th September.
2-2-40	"Calyx"	8th October.
1-1-40		8th November.
1-1-40		10th December.
1-1-40		15th January.

The dates given above apply to the Winter Nelis, Beurre Bosc being sprayed about a week later in each case.

By using the two strengths, a check was obtained both on the fungicidal effect and the russetting produced. Actually the total percentage of seriously russetted Pears was negligible under both treatments, though naturally on the average less where the weaker Bordeaux was used. The results obtained are as follows:—

Unsprayed trees (all varieties), 13 per cent. marketable Pears.

Strong Bordeaux (all varieties), 97 per cent. marketable Pears.

### MOTTLE LEAF OF CITRUS.

(Continued from page 6.)

Haas of the Californian Agricultural Experiment Station.

Despite the proof that mottle leaf may be caused by toxic proportions of certain minerals, and by deficiencies of others, there have undoubtedly been cases of the disorder in Australia which have been rectified by normally good soil management. In some Victorian citrus districts mottle leaf is associated with saline soils, high water table, and lack of soil humus. More careful irrigation methods, whereby the accumulation of salt is avoided and the water table kept reasonably low, have often helped to overcome the trouble in such cases.

In this regard it is also worth noting that the regular growth of green crops greatly assists in controlling a water table, and the turning under of such crops enriches the soil in humus, the lack of which may be a contributing cause to the mottle leaf.

It is really apparent that the varying conditions which are found to encourage mottle leaf do so by virtue of their disturbing effect on the feeding process of the tree. Further to this, good cultural practices, adequate (not excessive) applications of fertilisers, careful irrigation, and green cropping all assist proper tree nutrition.

As to this case of mottle leaf at Beetaloo Valley, which has inspired this enquiry, a critical examination of the practices on the grove in question may yield a clue to the most promising line of attack on the problem.—  
"Garden and Field."

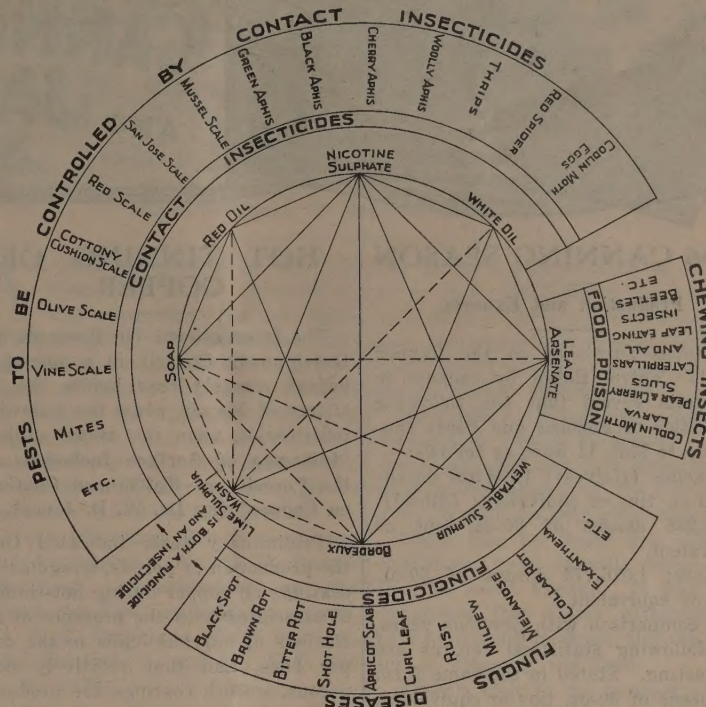
Weak Bordeaux (all varieties), 94 per cent. marketable Pears.

Calyx spray omitted (all varieties), 60 per cent. marketable Pears.

From the above table it will be seen that under the conditions experienced last season an excellent control was obtained with applications of both weak and strong Bordeaux, and that the omission of the calyx spray resulted in a substantial reduction in the quantity of marketable fruit.

Naturally some modification would be necessary for other varieties, and in other districts, and full details of this and other aspects will be published.

## SPRAY COMPATABILITY CHART



The ruled lines denote Sprays which will mix together. The dotted lines denote Sprays which should not be mixed.—Illustration produced by courtesy from booklet "Sprays that Pay," issued by A. Victor Leggo & Co. Pty. Ltd.

### ARSENICAL RESIDUE ON FRUIT.

#### Queensland Will Reject Consignments Above the Tolerance.

Queensland, like the U.K., will only allow one-hundredth part of arsenic per pound of fruit. The Queensland Dept. of Agric. states that far too much arsenic spray residue remained on Victorian Apples shipped to Queensland, and such consignments would in future be rejected. Mr. Ward, Superintendent of Horticulture, warns growers of the loss and inconvenience which will no doubt occur if they continue to send Apples showing arsenical residue.

#### Tightening of the Regulations Victorian Premier Will Introduce Amending Bill.

The Premier of Victoria (Mr. Dunstan) announces that a short Bill will

be introduced in the coming session to amend the laws relating to arsenical sprays being allowed to remain on Apples and Pears sent to other States.

### FIRST GRADE FRUIT TREES.

Instructive Catalogue Issued by Goodman's, Bairnsdale, Vic.

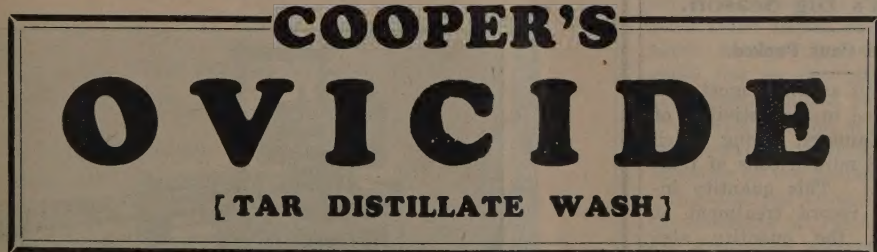
Success has followed the planting throughout Australia of fruit trees raised at Goodman's Nurseries, Bairnsdale, Victoria. Expert attention is given at all periods of the year. The firm has splendid stocks of trees in all varieties, particulars of which are included in their catalogue, which is available on request.

## FRUIT GROWERS ! Give Your Stone-fruit Trees a clean start.

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## 100% KILL of PEACH & CHERRY APHIS

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This claim has been proved by hundreds of Commercial Growers all over Australia. Be sure however that you use Cooper's "OVICIDE," the original Tar Distillate Wash.

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Manufactured by

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Victorian Distributor : F. R. MELLOR, 440 Elizabeth Street, MELBOURNE.



# CANNING AND JAM FRUITS

## 1936 CANNING SEASON

### Production and Exports.

Returns furnished to the Canned Fruits Control Board by canners in Australia reveal that the following quantities of Peaches and Pears canned up to May 11 were as follows:—

Peaches (Halves): 1,058,920 dozens of 30 oz. tins or equivalent; (Sliced): 1,008,295 dozens of 30-oz. tins or equivalent.

Pears: 1,616,773 dozens of 30-oz. tins or equivalent.

In comparison with previous years, the following statistical returns are interesting. Stated in the same form of dozens of 30-oz. tins or equivalent, returns for the previous six years are:—

	Peaches.	Pears.
1930 .. . . .	2,227,531	787,791
1931 .. . . .	1,367,591	205,733
1932 .. . . .	1,064,073	879,912
1933 .. . . .	2,566,778	1,059,342
1934 .. . . .	1,598,313	789,090
1935 .. . . .	2,202,873	999,527
1936 .. . . .	2,067,215	1,616,773

### 1936 Exports.

Exports from January 1 to April 30 expressed in dozens of 30 oz. tins or equivalent were:—

Apricots .. . . .	156,753
Peaches .. . . .	426,156
Pears .. . . .	350,181
Pines .. . . .	3,959
Fruit Salad .. . . .	482
	937,530

The destinations for the above period for all classes were:—

United Kingdom, 863,650 dozen tins 30 oz. or equivalent.

New Zealand, 7,129 dozen tins 30 oz. or equivalent.

Canada, 55,994 dozen tins 30 oz. or equivalent.

The East, 8,190 dozen tins 30-oz. or equivalent.

Miscellaneous, 2,567 dozen tins 30-oz. or equivalent.

Total 937,530 doz. tins 30 oz. or equivalent.

## Ardmona's Big Season.

### 8 Million Cans Packed.

1936 stands out as the longest season ever recorded in the activities of the Ardmona Cannery, during which approximately 8 million cans of fruit were processed. This quantity included a plant record treatment of Bartlett Pears, the quantity also creating an Australian record.

Ardmona's success at the last Imperial Fruit Show in England, when they were awarded 14 prizes for canned fruits in competition with all Empire canners, has resulted in a gratifying response from buyers in Britain towards this company's products.

The increased production was made possible by the provision of additions costing some £8,000, including both increased floor space and new machinery, which were put in hand ready for the season just past.

## HOT TINNING OF COPPER

The International Tin Research and Development Council, in a reprint of papers recently read before the Institute of Metals, gives the following information upon the above subject. "Influence of Surface Inclusions on the Porosity of Hot-Tinned Coatings on Copper" (by Dr. W. D. Jones).

Preliminary tests indicated that the production of porous, irregular tin coatings on copper during hot-tinning is associated with the presence of inclusions of cuprous oxide in the copper base, and that relatively non-porous, smooth coatings are produced in the absence of such inclusions.

The presence of cuprous oxide inclusions can be readily detected by amalgamation of the copper surface at room temperature by the use of acid mercuric chloride.

Copper containing oxide inclusions can be made to give non-porous smooth coatings by certain special pre-treatments which reduce the cuprous oxide to metal. Thus, the copper may be simply immersed for some minutes in cold hypophosphorous acid (2-50 per cent.), or treated cathodically in dilute caustic soda solution, the latter process being the more satisfactory.

Smooth tin coatings are readily obtained on oxygen-free copper in the absence of any special pre-treatment, and this material is recommended as the most suitable for hot-tinning. This is consistent with the view that cuprous oxide inclusions in other types of copper are a major cause of the production of irregular, highly-porous coatings.

In another paper, Mr. E. J. Daniels describes experiments on the "Hot-

Tinning of Copper: The Attack on the Base Metal and its Effects."

Examination of cross sections of tinned and soldered coatings on copper shows that there is always  $\text{Cu}_2\text{Sn}$  in contact with the copper and a layer of  $\text{Cu}_3\text{Sn}_2$  over it. This duplex layer tends to detach in fragments as it is formed, leading to contamination of the tin in the bath and the coating. The effect of this copper contamination on the irregular coatings typical of those on copper containing cuprous oxide inclusions, is beneficial up to about 1 per cent., due, it is thought, to the compound particles anchoring the liquid tin on the surface of the copper. This is in accordance with the fact that deliberate addition of copper to fresh tinning baths is common works practice. Excess of copper leads to rough coatings. Tests were made on ordinary copper and on oxygen-free copper.

## CANNED TOMATOES

### New Variety Introduced into South Australia.

The possibilities for the development of the trade processed Tomatoes is dealt with in a recent report from the South Australian Trade Commissioner in London (Mr. C. F. G. McCann).

Seed of a variety which lends itself especially to preserving without disintegrating into pulp has been sent by Mr. McCann to South Australia.

Further particulars are given in the article on this subject on the market grower section of this issue.

## AMERICA INVADES MALAYA

### Selling Methods Succeed.

Australia is seeking new markets overseas, and is exploiting the near East and the Islands markets with more or less success, but with frequent reports that only a limited trade can be expected from these sources.

Now comes a report from the U.S.A. Trade Commissioner in the Malay States to the effect that although imports of canned fruits into Singapore last year were lower than in 1934, American canners had increased their sales from 86 tons to 126 tons.

In canned vegetables the Canadians (mainly Aylmer brand) had controlled the market in general lines, but Japan supplied a fair quantity of canned Peas, whilst China had supplied most of the Tomato catsup required. His report concludes with a paragraph that is well repeated for Australian notice, "Australian competition in canned fruits during 1935 has not been serious, although their prices on Peaches, Pears and Apricots are about 20 per cent. under those of American manufacturers."

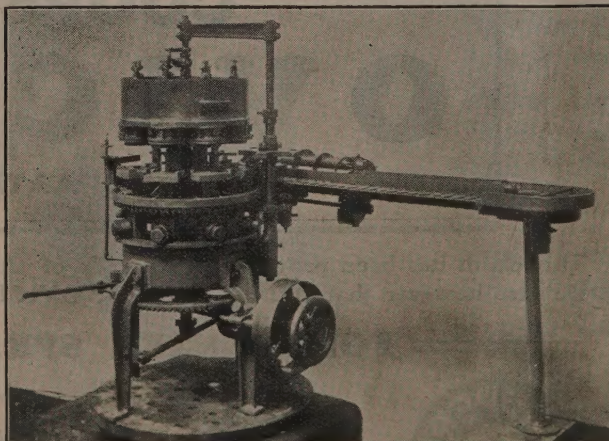
This looks like a definite challenge from a competitor. Price and distance are both in Australia's favor, yet our competition "has not been serious," and U.S.A. has increased her sales by 50 per cent. in one season.

Theatrical Manager (to prospective member of company). "Of course, I know I'm offering you rather a small salary for the part, but don't forget—you come on eating an Apple, which I have to pay for."

## The Austral Otis Andebar Cannery Equipment Pty. Ltd.

### CANNERY ENGINEERS

### South Melbourne, Vic.



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Box 3, P.O., South Melbourne.

## 8 VALVE ECONOMY SYRUPER

Manufactured in Our Works from Drawings of

Anderson, Barngrover

San Francisco



# DRIED FRUITS DEPARTMENT.

## Control Board's Report THE PRUNE INDUSTRY

19,000 TONS HARVESTED TO DATE.

Canadian Preference Restored.

THE Commonwealth Dried Fruits Export Control Board advises that shipments of the 1936 harvest of dried fruits to May 5 amounted to 18,977 tons, of which quantity 12,863 tons were shipped to Great Britain, 5,210 tons to Canada, and 764 tons to New Zealand. Shipments include approximately 16,000 tons Sultanas, 2,600 tons Currants, and 377 tons Lexias. The first shipments of the new season's harvest have arrived in London, and sales to date amount to 208 tons Sultanas, averaging £42/3/5, and 47 tons Currants, averaging £36/6/11 per ton. Larger shipments are shortly due in Great Britain, and it is anticipated that the market will open at steady rates. The Board notes with satisfaction that in the Budget proposals of the Canadian Government, which, incidentally, included tariff changes, which according to Canadian practice, formed part of the Budget, and as the result of representations by the Australian Government, the Canadian Government proposes to continue the preference on Australian-grown Raisins and Currants of 4 cents per pound during the currency of the Canadian Australian Trade Reciprocity Treaty. Hitherto the preference had been on the basis of 3 cents per pound, as provided in the treaty mentioned, with an increment from year to year of an additional one cent. The new proposals of the Canadian Government restored the full preference of 4 cents per pound, which had reverted temporarily to 3 cents per pound as on March 31 last. In view of the great importance of the Canadian market to the Australian dried fruit producer, the success of the representations of the Australian Government and the Australian Trade Commissioner in Canada (Mr. L. R. Macgregor) is

most gratifying to producers, assuring a very large and increasing market to Australia. Shipments to Canada during the past two seasons have covered 14,528 tons and 14,720 tons respectively.

### Draftage.

For some time past the Commonwealth Dried Fruits Export Control Board has been carrying on negotiations in Great Britain with respect to the charge known as Draftage, and arrangements have now been completed under which, as from May 1, 1936, the former draftage charge, which approximated 2 lb. per cwt.—about 1½ per cent.—will now be replaced by an adjusted charge of ¾ per cent, thus resulting in an all-round saving of 1 per cent. The approximate saving to the industry based on the average shipments for the last five years may be taken at between £10,000 and £12,000 sterling per annum. It is obvious that the alteration in trade custom in Great Britain, which has obtained from time immemorial as regards the dried fruit trade, has been made possible by the existence of a statutory organisation, representing the entire industry.

### VICTORIAN LEVY, 5/-.

The Victorian Dried Fruits Board has determined, in accordance with the Dried Fruits Act, that the levy to be paid this season by growers of dried fruits will be 5/- per ton. This is the same as last year's levy, and although, owing to the greatly reduced tonnage of the Currant crop, the board's revenue will be considerably less than last year, it hopes by careful control of its commitments, to meet its obligations out of the income.

FIELD DAY AT LYNDOCK, SOUTH AUSTRALIA.

Efforts to Increase the Size and Quality of Prunes.

AT THE REQUEST of the S.A. Prune Growers' Association, and arranged by the S.A. Dried Fruits Board a Conference and Field Day was held at Lyndoch, South Australia, on May 8. Speakers included the Minister for Agriculture (Hon. A. P. Blesing, M.L.C.), Mr. Pope (Chairman of the Dried Fruits Board), Mr. J. Victorsen (Chairman, S.A. Prune Growers' Association), Mr. R. A. Haynes (Secretary S.A. Prune Growers' Association), Mr. C. E. Russell (Growers' representative on the Board for the non-irrigated areas), Mr. A. G. Strickland (Chief Horticultural Instructor), and Mr. J. C. and A. W. Kelly.

Altogether there was a large attendance, and a full discussion on "Small Prunes" took place. It was pointed out that the difficulties of marketing small Prunes were many, and to obtain more sale the size must be increased: this could be done by paying closer attention to cultural practices. It was decided to ask to eliminate from the grading regulation all Prunes of over 120 to the 1 lb.

Messrs. Kelly and Son, of Lyndale Ltd., on whose property the conference was held, stated that the size of their Prunes had been increased from

100 to the pound in 1933, to 70 and 80 in 1935. The present consumption of ½ lb. of Prunes per capita per annum was capable of a large increase, which could only be effected by producing higher quality Prunes.

California produced an enormous quantity of Prunes as against South Australia's 500, and it is necessary to improve the quality of the Prunes in order to compete with other countries.

There was no doubt dry climatic conditions were largely responsible for the small Prunes. It was also suggested that closer attention be paid to pruning methods, also the matter of thinning the fruit.

After a visit to the orchard, where the pruning methods were explained to interested groups by Mr. A. W. Kelly and his assistant, Mr. Harry, conference reassembled and passed the following resolutions:

- (1) "That with a view of improving the quality and size of Prunes, an Advisory Committee, representative of the Prune growing districts in the non-irrigated areas, be appointed to collaborate with the Dried Fruits Board and the Chief Horticultural Instructor (Mr. A. G. Strickland) in laying down a programme for improved cultural methods."
- (2) "That the 'personnel' of such Committee comprise the following: Messrs. A. W. Kelly (Lyndoch), A. J. Chapman (Angaston), J. Victorsen (Clare), H. C. Platts (McLaren Vale), M. G. Rankine (Strathalbyn), H. B. Robson (Adelaide Hills and District).

### JAMES v. COMMONWEALTH.

Mr. Menzies, K.C., and Mr. Manning, of N.S.W., put their views before the Privy Council during May in the James v. Commonwealth Dried Fruits Case. They argued that the Commonwealth was not bound by Section 92 of the Constitution (which declared that trade between States should be absolutely free); that interstate trade should be free insofar as tariff barriers between the States could not be set up, but that the Commonwealth had power to legislate to provide for the orderly marketing of Australian primary products in the interests of the people as a whole.

Sir Stafford Cripps, K.C. (for the Governments of Tasmania and Western Australia), argued that the Commonwealth had not always claimed its present interpretation of Section 92 of the Federal Constitution. It had formerly been found expedient or convenient to give Section 92 its natural interpretation. It had been claimed that the ruling that the Commonwealth could not pass legislation such as was now disputed would gravely inconvenience Australian citizens. Tasmania and Western Australia, at any rate, resisted that viewpoint, which was mere assertion; unsupported by evidence. Judgment was reserved.

## Prepare to Check Re-infestation

Keep your trees clear of pests NOW for the sake of your next year's crop.

The dormant season is here, therefore safeguard your orchard by spraying with the most effective preventive agent against insect pests and scale. Gargoyle Red Spraying Oil, increasingly popular with orchardists each year, will prove most economical, because it gives the greatest and most lasting protection.

# Gargoyle RED Spraying Oil

VACUUM OIL COMPANY

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## DRIED FRUITS QUOTAS FOR 1936.

## New South Wales.

The Minister for Agriculture, on the recommendation of the New South Wales Dried Fruits Board, has determined the following quotas for the 1936 season, under the State Dried Fruits Act.

## Home Consumption Quotas.

Currants, 30 per cent.; Sultanas, 15 per cent.; Lexias, 40 per cent.; Prunes, 66 $\frac{2}{3}$  per cent.; Peaches, 40 per cent.; Apricots, 60 per cent.; Nectarines, 60 per cent.; Pears, 50 per cent.

The above quotas represent the maximum proportion of the varieties of dried fruits mentioned, which may be sold on the New South Wales market, and are known as "Home Consumption" quotas.

## Interstate Quotas.

The following was determined as export quotas under the Commonwealth Dried Fruits Act for purpose of interstate trade.

Currants, 70 per cent.; Sultanas, 85 per cent.; Lexias, 60 per cent.; Prunes, 33 $\frac{1}{3}$  per cent.; Peaches, 60 per cent.; Apricots, 40 per cent.; Nectarines, 40 per cent.; Pears, 50 per cent.

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## Orchardists' and Fruit Cool Stores' Association.

## Successful Conference at Shepparton.

Importance of Gas Storage :: Direct Expansion System Favored :: The Codlin Pest

OVER 100 DELEGATES and interested visitors, including eight from Batlow, N.S.W., attended the 16th Annual Conference of the Orchardists and Fruit Cool Stores' Association at Shepparton on May 28. Mr. J. J. Tully, presided.

The proceedings were harmonious, and decisions of far-reaching importance were concluded.

In the absence of the Mayor, delegates were welcomed by Cr. A. W. Fairley.

In officially opening the Conference, Brigadier M. J. Bouchier, Chief Secretary, said there was cool storage space in Victoria for 1,600,000 cases of fruit. The requests for further money for research was under consideration by the Cabinet.

Fruit-growing in the Goulburn Valley.

Mr. W. Young, President Northern Victoria Fruitgrowers' Association, delivered a valued address, tracing the history of fruitgrowing under irrigation in the Goulburn Valley. The gross value was now over £1,000,000 annually. The Sugar Concession grant of £216,000 per annum was a stabilising factor: Pears for export were successfully produced — 100,000 cases this year from 370 acres, with an additional 942 acres yet to come into bearing. An experimental orchard was greatly needed.

On the resolution of Mr. J. H. Lang, a vote of thanks was recorded.

## Advertising Fruit.

A resolution by Messrs. W. A. Thiele and W. P. Mair, in favor of 1d. per case levy on fruit for advertising purposes, was defeated and the matter was referred to the executive for attention.

Mr. McEwen, M.H.R., gave details of the constitution and scope of the Commonwealth Agricultural Council, and was cordially thanked.

## Gas Storage of Fruit.

Mr. J. E. Dodds, Batlow, N.S.W., commended the article on "Gas Storage of Fruit" in the May issue of the "Fruit World." He gave details of his personal inspection of the system, which doubled the life of fruit, the outturn being better for marketing than under the present method. The direct expansion system was favored: the correct regulation of the CO<sub>2</sub> concentration was most important. Research was needed here in this connection. Gas storage was a commercial proposition, and had come to stay. Australia should take notice of this important development.

## Direct Expansion Favored.

There was an interesting discussion as to the relative merits of the air circulation and the direct expansion systems. The latter was generally favored there being less wilt and shrinkage.

It was decided to ask the Dept. of Agriculture and the Electricity Commission to make controlled tests.

## Technical Conferences.

Mr. Moore urged the importance of a conference of cool storage en-

gineers to compare practical experiences. The proposal was approved and referred to the executive for action.

## Interstate Grading Regulations.

Messrs. W. P. Hutchinson and F. Moore gave details of proposed interstate grading regulations for Apples and Pears, and invited suggestions prior to the conference at Sydney on July 9 and 10.

## Codlin Moth Pest.

At the instance of Mr. F. Petty, it was decided to ask the C.S.I.R. and the Dept. of Agriculture to make tests for the destruction of the codlin moth in the chrysalis stage, in the bark of trees, underground, and in fruit cases.

There was an animated discussion regarding this major fruit pest. Mr. Ward stressed the value of orchard hygiene.

## Electricity Charges.

A motion submitted by Mr. Lang and seconded by Mr. Finger was carried: "That the Electricity Commission be requested to allow the 50 per cent. reduction of service charges when stores are closed down from date to date, and not for each calendar month, as at present." It was stated that one store received the allowance for two calendar months, but not the 16 weeks in which the store was closed down.

## Railway Freights.

On the motion of Messrs. J. H. Ely and E. Eagle, it was decided to ask the Railway Department to carry fruit for interstate markets at the same rate as charged for export fruit.

## Office Bearers.

Office bearers were elected as follows:—President, Mr. F. Moore; Immediate Past President, Mr. J. J. Tully; Vice-Presidents, Messrs. L. G. Cole and Frank Petty; Secretary, Mr. H. J. Noonan; Auditor, Mr. F. Barrett.

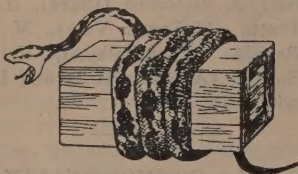
Visits of inspection were paid to the Shepparton Cannery, delegates being welcomed by the managing director, Mr. A. W. Fairley, and to the Pear packing house and cool stores operated by S. J. Perry and Co. The efficient equipment for packing storage and export of Pears was observed with interest. Explanations were given by Messrs. K. Weeding and A. Perry, while Mr. D. Harvey described and demonstrated the Pear washing machine.

[Report condensed — further particulars next issue.]

## PRUNE MARKETING.

## Improved Methods Wanted.

At the conference of the Australian Council of Agriculture, held at Canberra on May 27-28, it was decided to request that a conference of Prune growers and departmental officers be arranged when recommendations should be made to the Council for improving the efficiency of the marketing methods for Prunes.



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# New Zealand Notes

New Political Developments—Guaranteed Price for Primary Products :: Australian Citrus Embargo Not Yet Lifted :: Apple Exports and Prices.

(By Our Special Correspondent.)

**M**ANY DEVELOPMENTS of a political nature are taking place in the New Zealand primary industries. The Labor Government has recently brought before the House the Primary Produce Marketing Bill. In this article it would be impossible in the space available to give a complete summary of the Government's proposals. It is obvious that the organisation of the primary industries is in a process of evolution and the marketing overseas is likely to undergo many changes. The Bill will certainly become law within the next few weeks—the strength of the Government assures that. The Government will become the owner of the whole of the dairy produce—butter and cheese—made available for export overseas. They have also reserved to themselves the right to purchase butter and cheese intended for the local market. No statement has yet been made of the price to be guaranteed to the dairy exporter, but it is generally assumed that it will be between 1/1 and 1/2 per lb., which is certainly very much more than dairy producers have received on the world's markets during the past few years.

There are some tags attached to the guaranteed price proposal. It has been made clear by the Government that they expect farmers will pay better wages. The Government proposes to prevent the capitalisation in land values of guaranteed prices. An effort will be made to prevent land speculation. Just how this is to be handled has not yet been made known. The proposals in connection with the dairy industry are of considerable interest to fruit producers in that the Primary Produce Marketing Bill gives power to the Minister of Marketing to bring other primary produce under the Bill.

It can be assumed that before long there will be an agitation by other producers for their particular produce to be guaranteed as it is obvious that in certain directions costs must increase; with no compensating return from overseas. Fruit producers will undoubtedly face increased prices for boxes, strawboard and any other materials which are produced locally, as

with the introduction of a 40 hour week and an increase in wages in connection with some of the manufacturing industries, production costs must increase. As against this, the greater circulation of money within the country will give increased buying power which in turn should influence local prices depending always on the law of supply and demand. This, however, is of no assistance to the exporter.

For the last decade the primary industries of New Zealand have been working under a system of Control Boards with statutory powers and appointed by the producers concerned. This phase is passing and another era can be visualised—at least while the Labor Party is in power—of producers being responsible only for production and the marketing being handled by a Government Department.

Providing the usual channels of trade are employed, and no drastic experiments are made on marketing, the danger to our external trade will not be very great. New Zealand must realise that she is only a small unit, and as a small unit, she cannot possibly change the basis of world trade and certainly cannot, with success, force on to the overseas markets a policy which is not acceptable.

**Departmental Changes:** Many changes are contemplated, and some have been made in the personnel of the Departments which have as their care the primary industries. Dr. C. J. Reakes, for many years Director-General of Agriculture, has retired and his position will be filled by Mr. A. H. Cockayne, Assistant Director of Agriculture. Dr. Reakes, while occupying the office of Director, has seen the rise and fall of many Governments, and has served with distinction under many Ministers.

Mr. Cockayne has taken a leading part in the work of the Plant Research Station, and is one of New Zealand's authorities on grass farming. A son of the late Dr. Cockayne, one of the best-known horticulturists in the Empire who died a few years back, Mr. Cockayne brings to the position a

wide experience of the farming industries.

Mr. F. R. Callaghan has been transferred to the Plant Research Station at Palmerston North, and Dr. G. H. Cunningham goes to Auckland to take charge in that district. Both Mr. Callaghan and Dr. Cunningham have an extensive knowledge of the fruit business and the industry stands to gain with these two men at the head of the Plant Research Station which will take over all scientific research in connection with the fruit industry.

**Citrus Embargo:** Parliament is too busy with industrial legislation, guaranteed prices and mortgage legislation to bother very much at the present time with this subject, which is of such importance to the Australian citrus producer. No definite date has been fixed for the promised enquiry. In the meantime the importation of Cook Islands Oranges has commenced, but importers are having their troubles owing to a "go slow" policy on the waterfront, and a seeming reluctance on the part of the Cook Islands to ship under present conditions. Very shortly the shipments of South Australian Oranges should commence and these will go a long way towards relieving the shortage of citrus fruits.

**Apple Export:** The season is drawing to a close, and the total quantity to all markets will probably amount to 1,150,000—this after allowing for say 200,000 cases to markets other than the United Kingdom leaves a definite shortage on the United Kingdom quota. The quantity to other markets will depend on whether fruit loaded on optional bills of lading for the Continent and the United Kingdom is discharged at one of the Continental ports or carried on to London.

**Prices:** The price of early varieties was evidently affected by the quantity of South African, Argentine and U.S.A. fruit on the market. The latest reports indicate a tightening tendency, although the arrival lists of Australian and New Zealand fruit for April and May showed very heavy quantities. Cox's Orange Pippin, which is New Zealand's leading variety secured quite good prices at the commencement of the season, but these dropped quickly when heavy quantities were auctioned. Latest reports from England advise that certain quantities of Cox's Orange Pippin are being cool-stored to prevent a

further market drop. Judging from the quality of this variety coming out of storage in New Zealand there should be little risk this year of bitter pit, etc., however, the storing of a tender variety like Cox's Orange Pippin will always be doubtful, and it would seem that if storage in England is to become a permanent policy, some system of pre-selection in New Zealand is both advisable and necessary.

## N.Z. CITRUS EMBARGO.

Governments Still Negotiating, But Growers Warned to Use Present Trade Channels.

Consequent on reports as to the likelihood of the lifting of the N.Z. citrus embargo, many growers in N.S.W. have been withholding normal supplies of choice fruit from disposal on Australian markets. The Fruitgrowers' Federation of N.S.W. deemed it advisable to approach the Acting Minister for Commerce to obtain authentic advice, and the Secretary of the Federation (Col. Herrod) has issued a circular giving the Minister's reply, which is to the effect that while the Government is still conducting negotiations and is hopeful of a favorable result, no indication can be given of the likely outcome, and growers are advised to adhere to normal marketing arrangements.

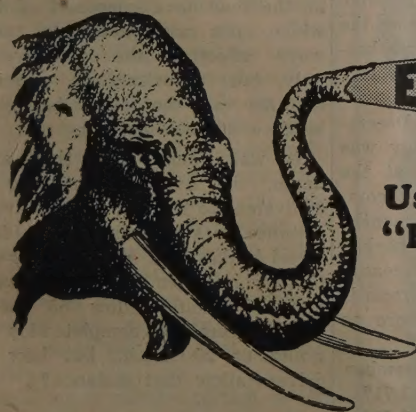
## ACTION BY AGRICULTURAL COUNCIL.

Modified Relaxation of Embargo Sought.

At a meeting of the Agricultural Council held at Canberra at the end of May, it was decided that the Commonwealth Government should ask the N.Z. Government, as an alternative to the complete removal of the embargo placed by N.Z. on the importation of Australian fresh fruit and vegetables, to consider the removal, for short periods in each year, of the restriction in respect of citrus fruits, Cherries, Grapes and Passionfruit, subject to suitable guarantees that the fruit is free from fruit fly and to the production of the necessary certificates from the State Departments of Agriculture.

## ILLUSTRATIONS ON PAGE 15.

The illustrations published on page 15 of this issue are reproductions of sections of the fruit tree nurseries of C. A. Nobelius & Sons Pty. Ltd., of Emerald, Victoria.



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Extract "BETTER FRUIT," U.S.A., February, 1934: "Idaho Spray Programme for Codlin Moth Control, 1934," by Dr. Claude Wakeland, Department of Entomology, University of Idaho. Experiments in the State for the past six years have shown that LEAD ARSENATE is the best, as well as the most economical insecticide that we have tested for Codlin Moth control. Entomologists are agreed that there is no substitute for Lead Arsenate that can be recommended to the public.

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# Motor Cars, Trucks, Tractors

## Starting in Winter

Unless a car is locked up in the garage and kept there all through the winter, there are no scratchings in the Winter Handicap for motorists. All must take their places at the barrier, but the best chances will be for those who have taken a little care over the necessary preliminaries.

A good start has won many a race, and there are two factors which every motorist should know about and make use of which will make this a certainty. These are the volatility of the petrol used, and the fluidity of the lubricating oil—the perfect combination for winter motoring and worthy of every motorist's consideration, so let us

drop our playful analogy and learn something of what these points mean in terms of comfort and economy in winter motoring.

Volatility is the petroleum chemist's way of measuring how a petrol vaporises. In the winter time particularly, correct high volatility is an essential for split-second starting and powerful performance through the warming-up period and afterwards. It ensures complete vaporisation of the petrol, and thus cuts down the use of the choke to a minimum. Excessive choking is most undesirable, because thereby liquid petrol finds its way into the cylinders, and liquid petrol there means wasted

petrol, and therefore, wasted power. Petrol burns in the cylinders only when in the form of a vapor correctly mixed with air. Liquid petrol does not burn in the cylinders. Besides representing waste, it dilutes the engine oil, and exposes the cylinder walls to excessive wear.

The use of petrol of correct high volatility will therefore do much towards securing comfort and economy in winter motoring, but there is still the important factor of correct winter fluidity of the engine oil.

Fluidity is that characteristic of an oil which enables it to circulate quickly. Winter conditions in the engine require the lubricating oil to be more fluid than the oil recommended for summer use, so that thorough engine protection is assured right from the moment of starting under the coldest circumstances. Motorists should therefore drain their sumps of summer oil and refill with the more fluid winter grade of high quality lubricating oil. Heavy oils absorb starting power and circulate sluggishly, thereby reducing the driving power of the engine and draining heavily on the battery to turn the cold engine over. They fail in correct winter lubrication.

Knowing the importance of these factors, Vacuum Oil Company is recommending motorists to make use of the high volatility of Super Plume Ethyl, and the correct fluidity of the recommended winter grade of Cleairo-sol Mobiloil for winter motoring.

### MOTORS AND MARKETS.

In a study made last year by Mr. G. B. Minns, Superintendent of Markets for the Melbourne City Council, it was discovered that the development of motor transport is nowhere more illuminating than in the transport of fruit and vegetables to the Victoria Market.

Whereas in 1927 horse-drawn vehicles bringing produce to the market represented 55.3 per cent. of the total vehicles and motor vehicles only 44.7 per cent., in 1935 the figures had changed to only 10.6 per cent. horses, and 89.4 motors.

But not only was this a factor in transport from nearby farms, but motor transport enabled orchardists and gardeners to go farther afield for their land, and also made possible country farms, far removed from the city, to receive benefits from marketing their produce in the large city markets.

Counts taken in June and December, 1935, showed that Tuesday was the busiest day of the week at the market during December. A comparison, showing that in six months the number of motor vehicles parked around the Victoria Market increased by nearly 25 per cent. The records for the three busiest days were as follows:—

	June.	December.
Tuesday . . . . .	1,480	1,717
Thursday . . . . .	1,352	1,731
Saturday . . . . .	1,324	1,713

This represents an average daily attendance of motor vehicles of 1,379 for June, 1935, and 1,720 for December, but two thirds of these numbers represented cars or trucks used by buyers coming to the market for supplies.

### LAZY BRAKES.

What the American terms "lazy" brakes, aptly describes an inefficient condition of the braking equipment of a car that cannot be ascribed merely to lack of periodical adjustment. It infers that although the brakes are more or less correctly adjusted, they do not respond as well as they should to pedal pressure.

One of the most frequent causes of "lazy" mechanical brakes is lack of lubrication of the many joints, bearings, etc., that make up the braking equipment. This lack of oil is particularly evident if the bearings of the cam operating shafts adjacent to the drums are dry. If brake bearings and joints are not continuously lubricated, rust will soon develop, resulting in a sluggishness which becomes more and more pronounced.

On no account should "lazy" brakes be ignored, in the hope that they will regain their vitality; they are an indication of a definite fault, which, even though it may be easy to set right, may develop suddenly if it is allowed to persist, and result in the brakes unexpectedly being found useless in an emergency.

### BRAKE ADJUSTMENTS.

If it is noticed that one brake drum becomes warmer than the others, it is likely that the brake is binding. If the drum is tapped with a spanner when the brakes are in the "off" position it should emit a clear, ringing note. A muffled, dull sound is almost invariably an indication that the shoes are in contact with the drum at some point. If the car has a tendency to swerve to one side when the brakes are applied the brakes are not equalising properly. This defect should be remedied without delay. It may require only a simple adjustment.

### SAFETY LANE TESTS.

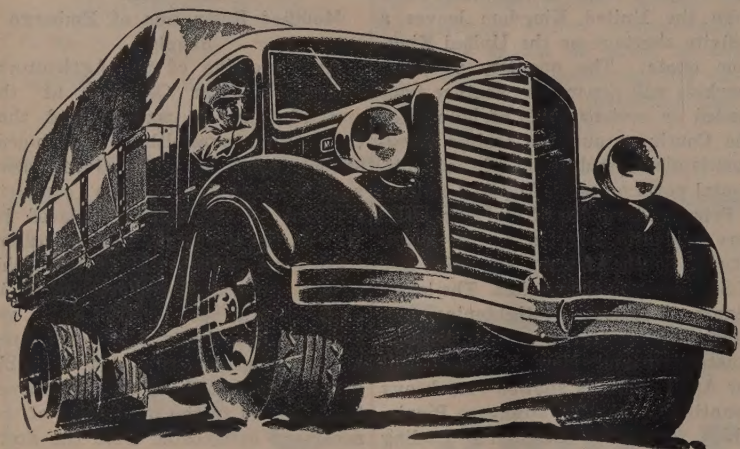
#### What They Teach Us.

A study of the records of the annual Safety Lane tests discloses some alarming things about the average driver and motor that are well worth repeating as a warning against possible accidents.

Of all cars tested, 18 per cent. had defective brakes, 32 per cent. defective tyres, 17 per cent. defective steering. In other words, 67 per cent. of cars on the road have some sort of defect which may cause accidents, not always affecting the defective car only, but, unfortunately, a menace to other cars that might be involved because of such defects.

It was found, too, that at 20 m.p.h. the average time lag was equivalent to 28 feet, and the average distance to stop was 27 feet for 4-wheel brakes, and 46 feet for 2-wheel brakes; in other words, the average motorist should allow 55 feet in which to come to a complete stop when going at 20 m.p.h., but how few drivers allow that distance?

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# Preparing the Land for the Planting of Fruit Trees

Land for New Areas :: Replacing Worn Out Trees  
The Value of Green Manure Crops :: Contour Planting

By C. G. Savage, N.D.A., N.S.W. Department of Agriculture.

IN A RECENT broadcast address, Mr. C. G. Savage, N.D.A., Chief of the Fruit Division, N.S.W. Department of Agriculture, gave some useful hints on the preparation of land for the planting of fruit trees.

Mr. Savage prefaced his remarks by stating that the increase in area of some fruits was not justified at present, though with certain others the area could be extended gradually.

In the case of some fruits, continued Mr. Savage, it is necessary to plant new areas to replace those on which the trees have passed their commercial life, in order to keep up continuity of supply. This brings before us two problems:—(a) the preparation of land that has not previously been planted to fruit trees; (b) the re-planting of old orchard areas.

Dealing with the preparation of new areas, care must be exercised in the selection of the site, various types of fruit being more suitable than others for certain conditions, some being able to stand colder and damper situations, while others give better returns under warmer conditions. Generally speaking, the best results are obtained when the aspect of the orchard is from north to north-east; the land is not liable to become water-logged, and is not subject to severe frosts.

In preparing virgin land, every care should be taken to properly remove all timber and large stones which are likely to interfere with cultivation. This means that the land should be cleaned of roots and large stones to at least a depth of 18 inches.

## Subsoiling is Important.

Having thoroughly cleared and grubbed the land, the soil should be deeply ploughed, and, if possible, should be subsoiled. In subsoiling, the lower layers of the soil should not be brought to the surface, but left in the position where nature has placed them.

The advantages of subsoiling are that the subsoil is broken up, allowing the entry of air and the easier penetration of moisture, thereby increasing the area in which the roots of the fruit trees can grow. The effect of subsoiling lasts for many years, as has been demonstrated in controlled plots placed side by side, the one being ploughed in the ordinary way, and the other being subsoiled in addition prior to planting. The growth of the trees in the subsoiled plot was found to be greater, the returns per acre were increased, and in years of light rainfall the trees on the subsoiled plot were better able to withstand the droughty conditions than those in the plot that was not sub-soiled.

Subsoiling is usually carried out by the agency of a special subsoil plough, or may be done with an old-fashioned steel plough, from which the mouldboard has been removed. The subsoiling is usually carried out by one of two methods: In the first method the top soil is turned over and the subsoil plough is drawn along the bottom of each furrow stirring the

subsoil to a depth of 14 to 20 inches. By this method the subsoil is stirred very thoroughly. In the second method the sub-soiling is carried out by motor power, before the surface soil is ploughed, the subsoil plough being drawn through the land at every two to three feet, and then cross subsoiled in the same way. After the subsoiling has been completed the surface soil is then ploughed in the ordinary way to a depth of 7 to 9 inches.

During the ploughing and subsoiling, many roots missed in the grubbing operation will be located; these should be removed.

Too much importance cannot be placed upon the advantage to be gained by removing as many roots as possible, prior to planting of the trees.

The removal of decaying roots will greatly reduce the risk of attack of the fruit tree roots by the Armillaria fungus which grows up decaying roots from which it attacks and destroys the growing roots of the fruit trees, thus greatly reducing the vigor of the trees, and in many cases destroying them.

The surface of the land at the initial ploughing can, with advantage, be left in a fairly rough state, especially if the land is worked up during the autumn; this will allow the surface soil to become weathered, and thereby sweetened.

If possible virgin land should be left unplanted for twelve months, or sown to a cereal crop. This will bring the soil into better condition for planting during the next season. A further advantage is that it will also allow many of the small roots of the native trees, which have been left in the soil to decay, thus further reducing the danger of Armillaria.

## Replanting Old Areas.

In reconditioning old orchard land, the trees should be grubbed and the roots removed. It is not advisable to re-plant the land immediately.

The soil should be thoroughly ploughed and subsoiled and worked for a couple of seasons.

If supplies of stable manure or other organic matter are available, heavy applications should be placed on the surface and worked well into the soil.

## Green manure crops

of legumes, such as Beans, Peas, Vetches or Lupins should be sown during the autumn months, giving liberal dressings of superphosphate to encourage the growth of the crop to insure a large amount of green trash to turn under. The green manure crop should be turned under when the plants have reached their maximum growth, and are still succulent, that is, when the plants are coming well into flower. If summer conditions are favorable for the growth of green crops, a second green crop can with advantage be sown in the spring, in which case such a crop as cow peas will be found to give excellent results.

If such a programme of green manuring can be carried out over the second year, the grower will find that the land is in excellent condition to plant the fruit trees during the following winter.

## Contour Planting.

In the past, planting on the contours has not been given the attention that should have been paid to it, with the result that much damage has been done to the orchard by sheet erosion and gullying of the surface soil. The loss of soil can be minimised by planting the trees on the contours, and by construction of contour banks.

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Mr. Val Kerr, one of Victoria's leading orchardists, writes:—  
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## PLANTING OF DECIDUOUS FRUIT TREES.

### Advantage of Earliness.

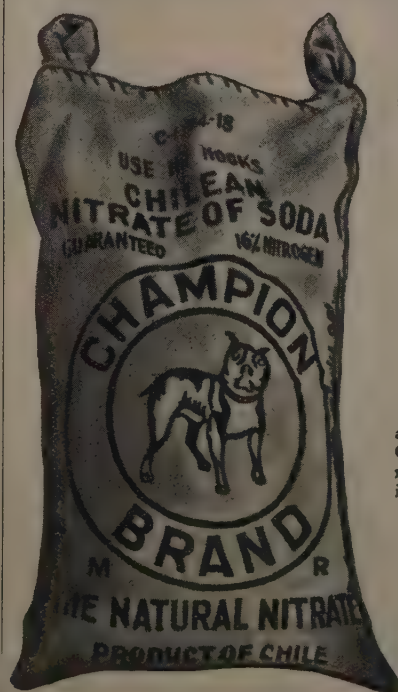
Deciduous fruit trees should not be transplanted until growth is dormant (states the N.S.W. Dept. of Agric.), but provided the land has been thoroughly prepared and is in moist but not over-wet condition, it is an advantage to plant as soon as possible after the dormant stage has been reached. The root becomes active, and throws out small new rootlets long before the top shows any sign of activity in the spring; and this is often noticeable when lifting young trees from the nursery. The advantage of having the tree in its permanent position when this early root activity takes place is obvious.

Before planting, the roots should be examined closely, and all bruised or broken roots cut away with a sharp knife or pruning shears. It is not necessary to leave roots longer than from 6 to 8 inches on the young tree.

The hole should have a mound or crown in the centre, so that the roots may be spread in their natural position, with a downward tendency, and the soil well worked in around them. The latter can easily be done by quickly raising and lowering the young tree an inch or two, while the soil is being replaced in the hole, after which it should be firmed and loose soil thrown over the top.

It is not advisable to plant while the soil is sticky, but rather when it is damp and friable.

Care should be taken to keep the roots covered with a moist bag to prevent their being dried out by wind or sun whilst planting is in progress.



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# BERRY FRUIT CULTURE

RASPBERRIES, LOGANBERRIES, STRAWBERRIES.

Seasonable Cultural Hints :: Manuring :: Pruning :: Varieties.

In a bulletin recently issued by the Tasmanian Dept. of Agriculture, valued hints by Mr. T. D. Raphael, M.A., of the horticultural staff, are included.

It is pointed out that in recent years the industry has been subjected to many fluctuations, and before going into berry fruit culture extensively, the intending planter should give consideration as to what is to be the outlet for his produce, as well as to the essential cultural conditions.

Berry fruits are grown successfully in all of the Australian States and in New Zealand. In Tasmania the total acreage of berry fruits was officially estimated in 1934 at 2,000 acres, including Raspberries, Loganberries, Black Currants, Strawberries, Gooseberries and Red Currants.

A summary of the hints given by Mr. Raphael are as follows:—

## RASPBERRIES.

Raspberries do well in any reasonably fertile type of soil, provided

there is adequate moisture. Cool soil conditions are most desirable, hence the main areas are in gullies and on sheltered slopes in the hilly country in the south.

## Pruning.

Most Raspberry varieties carry their fruit on short shoots arising from buds formed on young canes of the previous season. After fruiting these canes die back, and should be removed in Autumn, their place being filled by a further supply of young canes from the stools. The removal of the old canes is the main pruning treatment required. As the plantation gets older, however, the supply of young shoots from the stool is in excess of the requirements, and the general practice is to thin these out, leaving, on an average, from six to nine strong, healthy young canes per stool for next year's crop. The selected canes are usually tied loosely together at the tip in Winter to facilitate cultivation and lessen the danger of wind damage.

There is considerable diversity of opinion as to the advisability or otherwise of tipping the remaining canes. However, where particularly vigorous growth has been made, or where considerable late unripened growth is present at the tips, from 6 to 18 inches may be removed with advantage.

With varieties such as Lloyd George, which generally produces an additional part crop on the tips of the young canes in Autumn, it is necessary to prune the canes back to the first dormant bud. With all other varieties, under Tasmanian conditions, beneficial results follow light Autumn tipping. This results in more uniformly large fruit, which, arising as it does from the stronger wood, is adequately protected by leafage from the midsummer sun.

It is questionable whether an Autumn crop of berries is desirable or can be disposed of at sufficiently remunerative prices to make up for the vitality it absorbs from the canes which have later to bear the main crop. Full Autumn crops, however, if desired for the fresh fruit trade, may be obtained by removing all young canes from the stool in winter. This practice induces early production of fresh canes in Spring, which ripen and produce fruit about two months

after the main crop in December-January. Part of a bed may thus be kept exclusively as an Autumn fruiting area.

If a part Autumn crop is required, early removal of the canes which have Summer fruited is necessary, and current growths should be supported in some way to ensure that their fruiting tips are not weighted to the ground and damaged.

## Manuring.

As Raspberries frequently produce crops of two tons and over per acre, a large portion of which is seed-forming material, it will be realised that the soil will soon suffer unless the fertility is maintained by fairly heavy applications of manure. Undoubtedly the best, if obtainable, is well-rotted farmyard manure, its lasting qualities and water-holding capacity being of great benefit. The scarcity of such manure has led to the use of other organic fertilisers, such as blood and bone, guanos, etc., and these have been tried with fair success. Owing to the shallow rooting habit of Raspberries, and the necessity for keeping canes in check between the rows, green-manuring is seldom practised.

A combined manure, consisting of 5 cwt. blood and bone and 2 cwt. sulphate of potash, should supply the requirements of an acre of average bed in full bearing. An all-chemical fertiliser, consisting of 4 cwt. superphosphate, 2 cwt. sulphate of potash, and 1½ cwt. nitrate of soda, has been used with success on loamy soils. The application of nitrogenous fertilisers should not commence until a proportion of the fruit has set, otherwise excessive shoot and cane growth, at the expense of fruit, may result.

Should anthracnose appear, it can be controlled by Bordeaux spraying in Spring.

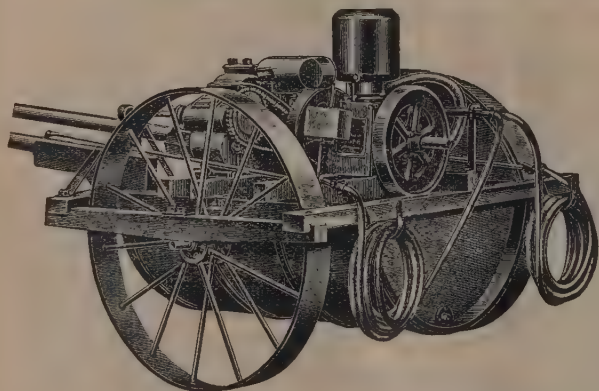
## Varieties.

The main commercial Raspberry variety at present cultivated in Tasmania is a strain of Red Antwerp. This variety, owing to its vigor, productivity, and good canning qualities, is much in favor with growers and processors.

Several Fillbasket types are also grown on a small scale, whilst the

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It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

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large-berried Duke is a favorite in gardens.

Recently the variety Lloyd George was imported from England, and has produced such fine processing fruit under Tasmanian conditions that it is likely to increase very rapidly in popularity. It is a vigorous, spreading grower and heavy cropper, and requires some form of support, whilst its Autumn fruiting tendency makes it popular amongst the suburban market gardeners.

#### THE LOGANBERRY.

##### Planting.

Previous to planting, the area should be deeply ploughed and disced. A dressing of lime at this time will sweeten the soil and improve its texture. Planting is usually carried out in early Spring, but where strong, vigorous sets are being used, Autumn planting is advisable, and will generally lead to much stronger growth during the first season.

It is doubtful whether the ideal planting method has yet been devised for Loganberry culture, and practices are still varied and localised. A method which has met with considerable success in some areas where the Loganberry is extensively cultivated is to set the plants from 12 to 16 feet apart in the rows, and bring all the fruiting canes to the right and all the young canes to the left. This facilitates picking and pruning considerably. The next season the order will be reversed.

##### Manuring.

When established, the Loganberry is one of the grossest feeders amongst the berry fruits, and unless manuring is carefully carried out even the richest soil will become impoverished after a few seasons' cropping. An established bed will often produce over four or five tons of fruit per acre.

Much the same balance of manurial constituents is required as with Raspberries, and, bearing in mind the heavy crops borne, quantities of manure can be regulated accordingly.

#### THE STRAWBERRY.

Owing to its shallow-rooting habits the Strawberry requires a good, retentive soil, containing ample plant food in the form of humus. A good moisture supply is all-important, and, where it is possible, judicious irrigation will generally fully repay any cost involved.

##### Propagation.

During the summer, and more particularly after fruiting, established plants throw out a number of long shoots, or "runners," from the crown. These produce small plants at intervals, which, under moist conditions, will root readily where they come in contact with the soil. When well rooted, such plants may be severed from the parent and transplanted. It is generally recognised by the most successful growers that the success of a plantation is largely dependent on the careful selection and propagation of the young plants in the first instance. Runners should only be taken from vigorous, healthy strains of known cropping capabilities. The first-formed and earliest-rooted runners are recommended, four to five being selected from each plant. Recent tests at East Malling, however, have shown that although such runners will probably show up to advantage the first season after planting, and are preferable for that reason, by the end of the following season fourth and even fifth plants formed

on a runner shoot, will have caught up with these. This proves that there is no actual deterioration from the point of view of vigor and where runners are scarce, such may be successfully utilised.

Both runner beds and newly-planted areas should be carefully examined periodically, and all plants showing any weakness or abnormalities removed and replaced by healthy specimens. In this way virus diseases will be controlled to a great extent, and the production of the areas maintained at a high level.

The method of propagation which has proved most successful, and is generally used where the Strawberry is produced extensively, is to lay down "runner beds" each season for current requirements. These consist of selected maiden stock, planted on clean, fertile soil. No fruit is let form, and a crop of strong runners is produced fairly early in the season, and transplanted at the end of the summer. The parent plants are either scrapped at the end of the season or used as an ordinary fruiting area next year.

##### Planting distances

will vary with the variety, soil, and method of cultivation to be practised. On steep banks and small areas, which will involve only hand work, closer planting may be carried out, whereas on larger areas, where horse cultivations are carried out, a plant of 36 inches by 15 inches is usually most satisfactory. Such planting distances will give about 12,000 to 13,000 plants per acre.

Another method which has certain advantages is to plant two close rows at 12 inches apart and one broad one at 36 inches, the plants being set at from 12 to 18 inches apart in the rows on the triangular system. This method is most suitable for irrigated areas, and also facilitates picking.

Under certain conditions, as in parts of Canada, plants in the double rows are allowed to "mat" into a solid strip, cultivation being only carried out in the broad alleys. The production life of such beds may be somewhat limited if the ground is weedy or the Strawberries of a weak growing strain.

After harvesting little is done to the bed until the end of Summer, when the straw litter is either forked off, burnt, or ploughed in. After this the whole bed is cleared up for Winter hand-hoeing is carried out, and all runners removed.

Where the system of burning off the straw between the plants after fruiting is followed, care should be exercised to ensure that this is rapidly performed and done before any young leaves have formed. Aphids, red spider and mildew will all be checked in this way.

##### Manuring.

Strawberries are gross feeders, and respond particularly well to liberal dressings of well-rotted farmyard manure. An adequate moisture supply is essential to the successful culture of the fruit, and undoubtedly much of the value of farmyard manure is due to its water-holding capacity in the soil.

Dressings of blood and bone at the rate of 5 cwt. to 6 cwt. per acre, supplemented by 1½ cwt. of sulphate of potash, have given good results in some parts, though other artificial fertilisers, unless assisted by irrigation, have proved rather disappointing.

The system of applying farmyard manure and complete fertilisers

year about has produced fairly satisfactory results. Potash fertilisers must not be neglected, and sulphate of potash is preferred for this purpose to the chloride salt.

Much can be done towards the successful establishment of a bed by the preliminary preparations. If good virgin soil, free from weevil, is selected, cleared, dressed with lime, and later manured—and sown down in spring with a leguminous cover crop, such as Horse-Beans — Strawberries planted a few months after ploughing the Beans under should grow well, and produce a lasting bed. The humus formed by the Beans will assist towards water retentiveness, and build up the slowly available nitrogenous matter in the soil.

##### Varieties.

A great many varieties of Strawberry are at present under cultivation, and the grower has a wide range to choose from as regards type, season of ripening, and suitability to local conditions.

Most commercial areas are planted with the Ettersburg, or so-called

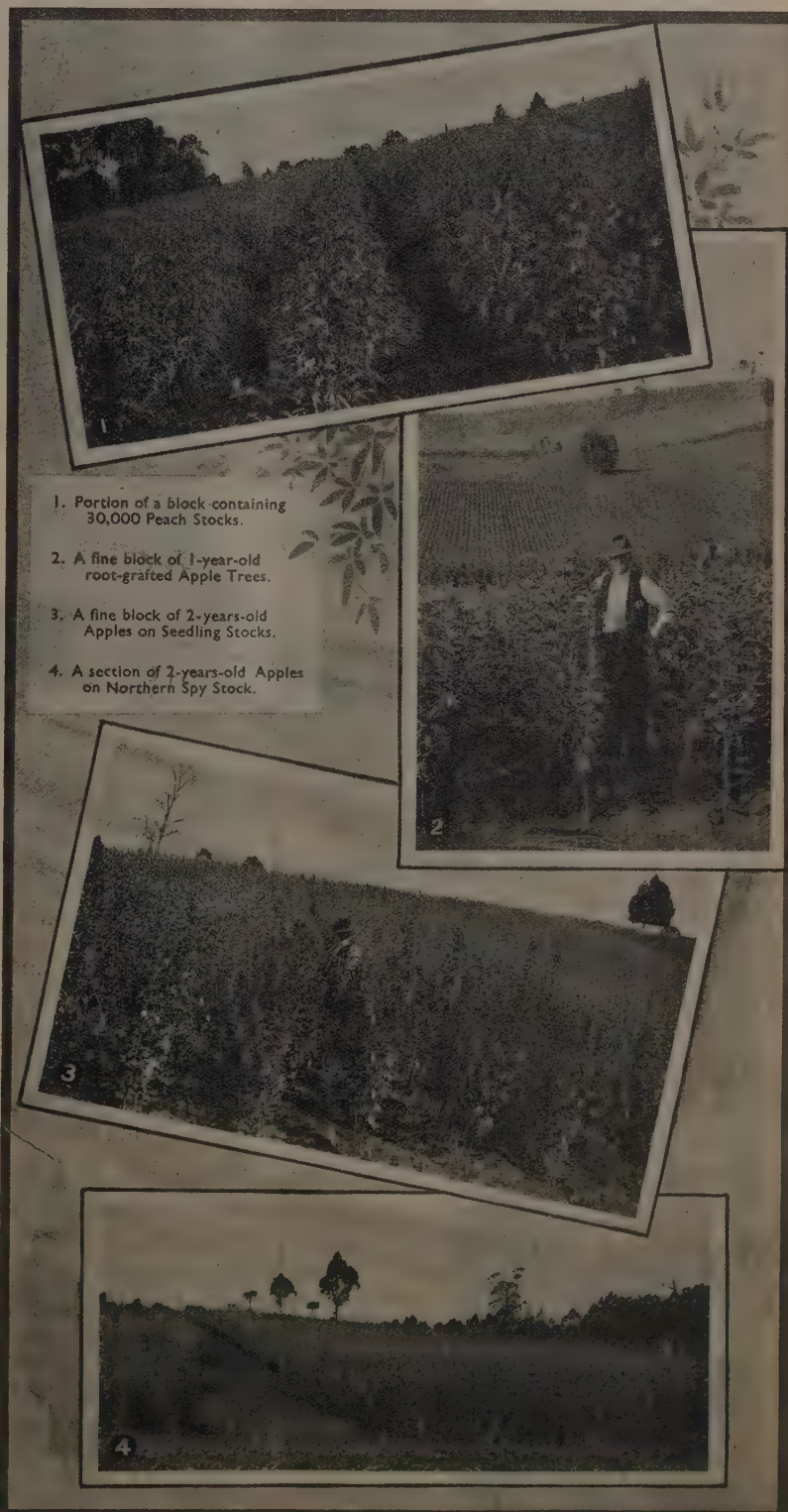
"tree" type of berry. The name does not imply any particularly large, high-growing plant, but refers rather to its method of fruiting, vigor, and longevity. The berries are firm and of good color and canning qualities, and are generally suited to Tasmanian conditions.

The early-bearing Royal Sovereign, with its large, juicy berries, is much grown near the towns, where it is sold for consumption in the raw state. Lack of selection and careless propagation, however, have led to serious deterioration in this variety here in recent years.

Recently special virus-free strains of Sovereign have been imported, and it is hoped to eventually build up and renew all beds in the State from these plants.

Tardive de Leopold and Oberschlesien, varieties recently imported from England, have become acclimatised, and are at present showing great vigor and promise.

Melba and Abundance are also grown throughout the State, and some heavy producing strains are under cul-



1. Portion of a block containing 30,000 Peach Stocks.
2. A fine block of 1-year-old root-grafted Apple Trees.
3. A fine block of 2-years-old Apples on Seedling Stocks.
4. A section of 2-years-old Apples on Northern Spy Stock.



tivation; these, while being scarcely up to the standard of Sovereign, nevertheless may be usefully planted under certain conditions.

#### Renewal of Beds.

The success of the Strawberry grower is largely dependent on his having suitable beds coming in to take the place of the older and less profitable areas.

It will be generally found that after the third or fourth full crop the beds have become patchy, and the plants have lost much of their previous vitality. Where older beds are reported to be bearing their sixth or seventh crop it will generally be found that runners have been allowed to grow naturally, and not only fill up gaps where plants have suffered from insect injury, but also close in the gaps between plants in the row rendering effective hoeing almost impossible.

It is therefore advisable to form a bed about every second year, and only

retain cropping areas for three or four seasons.

#### Pests and Diseases.

At the present time only one really serious pest effects Strawberries in Tasmania, this being the wingless Strawberry weevil (*Otiorrhynchus sulcatus*). This pest occurs practically throughout the State, and does not confine its attention to Strawberries alone, though this plant takes preference.

The weevils themselves are hard to find, being grey-brown in color, with a long proboscis. When frightened, the weevil shams death. During the night they feed on the foliage of many plants, cutting out characteristic irregular pieces of tissue. They may be found during the day resting under clods and rubbish, and traps of this description will lead to many captures.

The grub is creamy-white in color, with a brown horny head, and is somewhat bent in shape; it has only

very limited powers of movement in the soil. The main damage is caused by these grubs feeding on the roots, just under the crown of the plant, and occurs in varying stages of development from November to August. Affected plants produce small, discolored foliage, and parts of the crown attacked die during summer through lack of sufficient root.

No satisfactory control has yet been discovered. Soil fumigants, however, applied in spring and early summer, will kill the adults and prevent others from coming. Heavy arsenate of lead sprays will check those feeding on the foliage. The grubs are very resistant to treatment; constant hoeings will kill many, and birds and poultry devour them ravenously. By frequently changing the beds, weevil damage seldom becomes serious; infested areas should be spelled for several years before replanting.

(Black and Red Currants, also Gooseberries, will be dealt with next issue.)

#### Ottawa Agreement Obligations.

Australia's Exports to U.K. Increasing.

#### Britain Not Averse to Development of Australian Secondary Industries.

SOME INTERESTING COMMENTS on recent tariff controversies were made in an address by the British High Commissioner (Sir Geoffrey Whiskard) recently in which he dealt with broad economic aspects of trade relations between Britain and Australia.

After speaking of certain increases in Australia's trade with the U.K., Sir Geoffrey concluded:

"There is still a belief in Australia that the United Kingdom is jealous of the growth of Australia's secondary industries.

"Whatever may have been the case in the past, a very great change has taken place in recent years. Let us bring the question down to one of hard cash. Suppose Australia had never established a single secondary industry and had relied upon her exports of primary produce to purchase all she could not have produced herself. Her imports from Britain would have been less by a great amount than they are to-day. That hard fact has not escaped the notice of those at home. Balanced production is necessary to proper national growth. Healthy, secondary and primary industries side by side alone can enable Australia to increase, to the extent we should like to see, her absorptive capacity for products."



# I. C. I. Winter Wash

Soaking ... penetrating ... KILLING ... I.C.I. WINTER WASH destroys Green Peach and Cherry Aphids, Apple Capsid bugs, etc. in the egg stage, leaving the tree free of these pests for the spring growth.

The tar-oil used in I.C.I. WINTER WASH is guaranteed to be of the best high boiling neutral quality, and is converted into a **creamy emulsion**. It is **not black in colour**, and does not discolour the fruit. It is emulsified by a patent process which renders the emulsion stable even in the hardest water, and at the same time ensures an even distribution of oil over the trees in the form of a film which is resistant to adverse weather conditions.

An illustrated folder, fully explaining the use of I.C.I. WINTER WASH will be gladly sent free, and post free to any address in the Commonwealth.

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Splendid stocks available for planting NOW — All varieties in strong, healthy, well-grown Trees, true-to-name and free from insect pests, suit all climates. Yield bumper crops of finest fruit for Home and Overseas Markets.

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PICNIC POINT NURSERIES  
BAIRD DALE - VICTORIA



# Strawberries in Victoria

In its interesting illustrated bulletin on Strawberry culture, the Victorian Department of Agriculture states that

## Farmyard Manure

is the best general purpose fertiliser; it contains large amounts of humus-forming materials (which improve soil texture), nitrogen, and other plant foods. Well-rotted stable manure may be applied when the land is being prepared for planting at the rate of 10 to 12 tons per acre on average soils. Poultry manure, which is richer in readily available nitrogen, should be used in smaller quantities.

The supplying of humus to the soil is a necessity.

The following programme of fertilising is suggested, subject to modification, according to soil and climatic conditions:—

### Autumn (before planting)—

- 2 cwt. superphosphate, or
- 4 cwt. blood and bone.
- 1 to 2 cwt. sulphate of potash.

### Early Spring—

- 2 to 4 cwt. superphosphate.
- 1 to 2 cwt. sulphate of potash.
- 1 to 2 cwt. nitrate of soda or sulphate of ammonia.

In an established plantation the early spring dressing only will be needed.

Some of our Victorian soils are extremely acid, and would benefit from moderate liming.

## Planting the Rows.

The rows should be marked out carefully by means of a wheel-marker or line. The soil should be in moist condition at setting out, and plants should not be exposed to sun or wind for any length of time. Previous to planting, all but the inside leaves of

the young plant should be removed, and, if necessary, the roots trimmed to 3 or 4 inches in length with a sharp knife or secateurs.

Setting is usually done by hand, holes being made 4 inches deep and 6 inches in diameter by means of a spade or other implement. Sometimes a shallow furrow is run up the row, and plants set along the land-side of the furrow. Whatever system is used, the roots of the plant should be well spread, and the soil pressed tightly in around them; loose setting is a frequent cause of failure. When finally settled, the soil surface should be even with the crowns of the plants; planting either too shallow or too deep must be avoided. A cool, cloudy day, with rain impending, is an ideal time for transplanting.

## Interpollination.

The Strawberry is somewhat peculiar in that different varieties produce different kinds of flowers. Some varieties, such as Edith, Sunbeam, and Melba, have flowers bearing both male and female organs, and are therefore capable of self-fertilisation. Such varieties are said to possess "perfect flowers."

Others, such as La Marguerite, have only female organs, and therefore cannot produce fruit unless pollen from some other perfect variety with stamens is available. If an imperfect variety (such as La Marguerite) is grown, care must be taken to select a perfect variety for interplanting with it, so as to provide for pollination. The interplanted varieties must flower at the same time, and it is desirable that the blooming period of the perfect variety should be longer than that of the imperfect. Even when



Double or matted row system of growing Strawberries.

perfect varieties are grown, it is preferable to plant more than one variety, as in most cases cross fertilisation results in more fruit than self-fertilisation. Where a pollinising variety is necessary, the proportion of one row of pollinising plants to one or two of the variety to be pollinised is quite satisfactory.

## Varieties.

Two of the most favored varieties in Victoria are Melba and Wilson's Pride. Other varieties grown in a smaller way include Sunbeam, La Marguerite, King Edward VII., Ettersburgh, Leura, Cresswell's Seedling, and Rhode's Special. New varieties are being constantly tried out.

# Orchard and Farm Engine Power

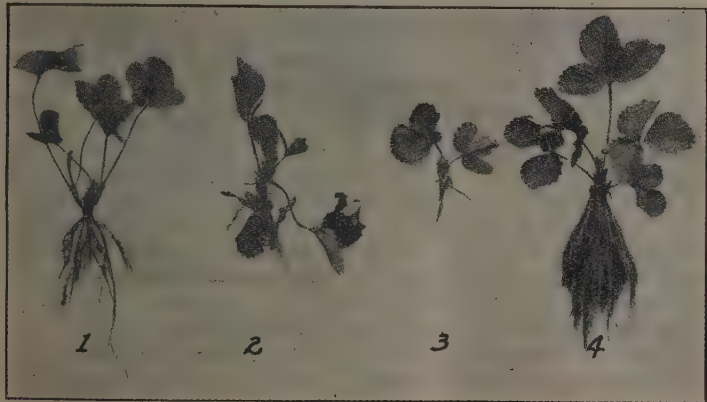
## Unit With Variable Speed Governor

### McCormick-Deering Development

Stationary engines for all kinds of farm jobs have long been a specialty of the International Harvester Company. A new and remarkably adaptable engine of this class has just been placed on the market. It is available in two sizes, with variable power ratings of 1½ to 2½ h.p., and 3 to 5 h.p. By a simple adjustment of the governor regulating screw, the owner can operate his engine at a speed in keeping with the work he has in hand, and the horsepower required to do it. This, in effect, gives the owner the advantage of two engines in one. The use of low-cost kerosene fuel gives the additional economy which every orchardist will appreciate.

Another feature of this compact and neatly-designed engine is the automatic lubrication—all moving parts are automatically oiled at every turn of the governor gear, which revolves in a bath of oil. All parts, too, operate in a completely enclosed one-piece crankcase, and are fully protected against rain, dust and dirt, so that the engine can be operated out of doors in all weathers. The high-tension Wico magneto, with impulse starter, assures quick and easy starting at all times.

Orchardists of all classes, including those who have already experienced the advantages of engine power for their jobs, will find much to interest them in this new engine.



1.—Over-developed crown and too small a root. 2.—Both crown and root too small. 3.—A very young and undesirable plant. 4.—A properly developed root for transplanting.  
(Blocks by courtesy "Victorian Journal of Agriculture.")

## Fruit Trees & Fruit Tree Stocks

Splendid Stock of Healthy Plants Available.

APPLES, PEACHES, PEARS, PLUMS, APRICOTS, CITRUS, ETC., PACKED AND DESPATCHED TO ALL PARTS OF THE WORLD.

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**GUARANTEED 99% PURITY**

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MARKETS for re-export of EMPIRE FRUIT.

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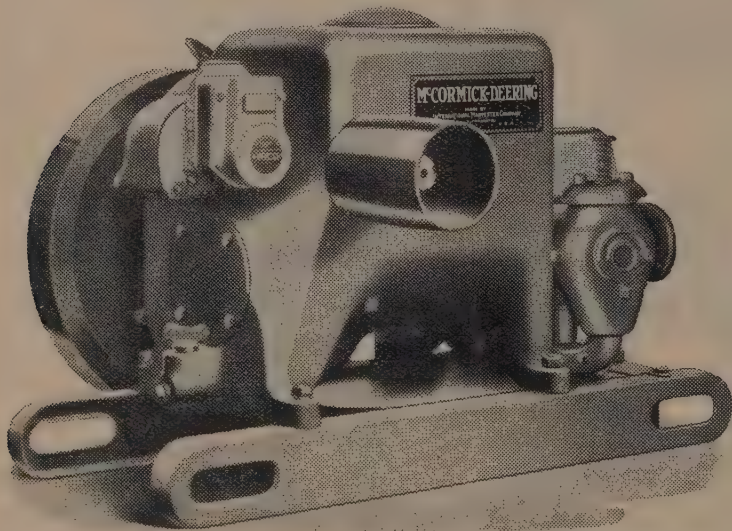
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Two Sizes: 1½ to 2½ h.p. and 3 to 5 h.p.

IN THESE COMPACT NEW MODELS we offer you all-star engines  
for all farm work. They have variable power ratings—1½ to 2½  
h.p. and 3 to 5 h.p.—and are qualified to do their full share of  
work in each power class, spreading their great usefulness over a  
wide range of duty. They are quality engines throughout ...  
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engines for outdoor as well as indoor operation. Their small over-all  
dimensions and light weight enable you to place these engines in  
out-of-the-way corners and to transport them easily from job to job.

Be sure to see the new McCormick-Deering Kerosene Engines at  
the local agency. Or write us for specific information.

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# Fruit Industry Cultural Research

Federal Government Grants £20,000 for Scientific  
Investigation into Apple and Pear Growers' Problems

FOLLOWING the helpful contact  
between the Australian Apple  
and Pear Council with the  
Federal Government, an announce-  
ment was made by the Government  
that £80,000 would be distributed  
among Apple and Pear growers who  
exported their fruit in 1935 on the  
basis of a bounty of 4d. per case, also  
that £20,000 would be made available  
for Apple and Pear cultural research  
work.

The following table shows how the  
grant of £20,000 has been allotted.  
This was arrived at after a confer-  
ence was held between officials from  
the Council for Scientific and Indus-  
trial Research, Commerce Depart-  
ment, and State Agricultural Depart-  
ments.

	Table.		
	Cultural Research. Practices. Total.		
	£	£	£
C.S.I.R. . . . .	2,450	—	2,450
N.S.W. . . . .	720	850	1,570
Victoria . . . .	1,300	3,350	4,650
Queensland . .	1,000	550	1,550
S. Aust. . . . .	1,200	1,150	2,350
W. Aust. . . . .	1,000	550	1,550
Tasmania . . .	2,350	2,400	4,750
Thrips (special)			150
Contingencies			980
			£20,000

This appreciated grant will be used  
as follows in the several States:

### Victoria.

The Superintendent of Horticulture,  
Victoria, advises details of allocation,  
thus:—

(A) Research: Further studies for  
the—

(1) Control of codlin moth, with  
particular reference to the pest at-  
tacking Pears;

(2) Extension of studies on the  
mineral deficiency of Apple and Pear  
trees, with a view to obtaining a  
greater knowledge on manuring of  
these fruit trees. This work will be  
done at Burnley as well as in various  
fruit districts, and will to some ex-  
tent also cover the study of storage of  
fruit taken from manurial plots.

(B) Instructional: Provision will be  
made to extend instruction in fruit  
packing, the re-working of unsuitable  
varieties of Apple and Pear trees,  
and demonstrational plots relative to  
the control of codlin moth and black  
spot will be extended throughout Vic-  
toria.

:: :: ::

It is of interest to place on record  
the present research programme of  
the Victorian Dept. of Agriculture, as  
the Federal Grant is supplementing  
and extending this service (apart from  
the Federal grant).

Work already in progress is being  
now done on the following sub-  
jects:—

Both Black Spot and Codlin Moth:—

Apples: Harcourt, Drouin, Wan-  
tarna, Red Hill.

Pears: Shepparton.

Apples and Pears: Geelong.

Black Spot only:—

Pears: Tyabb, Doncaster.

Codlin Moth only:—

Apples: Doncaster.

### Fertilizer Experiments:—

Apples: Upper Beaconsfield and at  
Burnley.

Brown Rot and Peach Rust: Goulburn  
Valley.

Red Scale of Citrus Trees: Bamawm  
and Mildura.

Citrus Bud Selection Plots: Merbein  
and Mildura.

Citrus Root Stocks and Fertilizer Ex-  
periments: Young Trees —  
Irymple.

Citrus Fertilizer Trials — Mature  
Trees: Merbein.

Two Proposed Fertilizer Experiments:

(a) Prunes: Bamawm.

(b) Vines, Wine varieties Ruthers-  
glen.

Also research work in conjunction  
with C.S.I.R. is being conducted on  
storage of fruit at Government Cool  
Stores.

### SOUTH AUSTRALIA.

Expenditure of Commonwealth Grant,  
£2,350.

Of the Commonwealth grant of  
£20,000 for fruit research, South Aus-  
tralia was allocated a sum of £2,350:  
Mr. A. G. Strickland, M.Ag.Sc., Chief  
Horticultural Instructor, advises that  
it is proposed to expend on research  
and advisory work in the following  
manner:—

### Research Work.

Appointment of a Horticultural Re-  
search Officer to undertake in co-op-  
eration with present staff, a two-year  
programme of investigational work,  
chiefly on the following problems:—

(a) Codlin Moth:

Field spraying trials and demon-  
stration plots to be laid down in re-  
presentative districts. Various ma-  
terials and schedules will be tested,  
and more intensive work will proceed  
on the reliability of lures as an in-  
dex to time of spraying, the incidence  
of spray injury, particularly in re-  
gard to the effects of certain spray  
materials on Cleopatra Apples, and on  
treatments for removal of spray resi-  
dues.

(b) Black Spot:

Experimental and demonstrational  
spraying plots will be laid down in  
several representative districts hav-  
ing varying climatic characteristics,  
and various spray schedules will be  
studied in relation to their efficacy in  
controlling black spot, and liability to  
induce russetting and fruit injury.

(c) Fertilizers:

Preliminary work will be conducted  
on a recently established fertilizer  
experiment at Blackwood, mineral de-  
ficiencies will be investigated by  
means of tree injection tests, and if  
possible, experimental and demonstra-  
tional plots will be laid down in one  
or two representative districts.

(d) Pollination:

Blooming period data is to be col-  
lated, and preliminary work will pro-  
ceed to determine the pollination re-  
quirements of the chief Apple and  
Pear varieties.

### Advisory Work.

Two special instructors are to be  
appointed for a term of twelve  
months, and these instructors will  
concentrate on advisory and demon-  
strational work in connection with re-



working of unsuitable varieties of Apples and Pears, and packing for export of pome fruits.

In addition, it is proposed to carry out a fruit tree census; at present there is no authoritative information regarding the ages and varieties of Apple and Pear trees in South Australia, and this census will be valuable in many respects.

Of the total South Australian allocation of £2,350, £1,200 will be expended on research work and £1,150 on extension work.

#### TASMANIA.

Details of the Federal Research grant as allocated for Tasmania, are set out by Mr. P. H. Thomas, Chief Horticulturist, Dept. of Agriculture, as follows:—

A. Allocation for demonstration and advisory work and the improvement of cultural practices, including demonstration of reworking, etc., for one year.

3 instructors for packing and reworking .. . . .	£1,800
1 orchard instructor .. . . .	600
	<hr/> £2,400

B. Allocation for research for two years.

Tasmania:

1 plant pathologist for studies of black spot, etc., and equipment .. . . .	£1,600
1 assistant entomologist for jassid and light brown apple moth .. . . .	750
	<hr/> £2,350

#### NEW SOUTH WALES.

The sum of £1,570 was made available to New South Wales, and advice to hand from Mr. C. G. Savage, Director of Fruit Culture, N.S.W. Dept. of Agriculture, are as follows:—

This money will be used in paying the salary and travelling expenses of a fruit instructor who will give demonstrations in the reworking of pome fruit trees of unsuitable varieties to the more profitable sorts, and in demonstrating the best methods of grading and packing of fruit.

An assistant will also be appointed to the staff of the experiment station at Bathurst, where some 40 acres have been set out to stock and scion investigations with Apples and Pears. The work at this station is the most comprehensive of its kind being carried out in the Commonwealth, and an immense amount of data, which will be of great value to the pome fruit growers, will be obtained. The Assistant will also assist in investigations for the removal or arsenical residues from pome fruits which will include the studies of the various chemicals used for the removal of arsenical residues, also the effect upon the storage life of different varieties of pome fruits. The purchase of a washing machine for removal of arsenical residues has also been provided for to supplement the up-to-date plant which is being installed at the Bathurst Experiment Station.

The extension of the studies into Internal Cork of Apples in the New England district is provided for, and it is hoped from these new investigations, together with the continuance of those already in progress, will in the near future provide definite recommendations in connection with this physiological defect.

#### N.S.W. CITRUS EXPORT ASSOCIATION.

##### Resolutions to Government.

A meeting of the above association, attended by twelve representatives of citrus exporters, was held recently to discuss arrangements for the coming citrus export season.

In connection with the measure of Government assistance required, the following resolutions were adopted:

"That a communication be addressed to the Federal Government applying for an export bounty of 3/6 per case for the coming season, pointing out that the continued loss of the New Zealand market renders it essential for some encouragement to be given to export, and that an early decision be urgently requested in view of the necessity for making immediate shipping arrangements."

"That in respect to any difference of opinion held by South Australia regarding the amount of the bounty, it be pointed out that South Australia may reasonably be satisfied with a lower rate as it alone of the States, enjoys the privilege of shipping to New Zealand, and has a ten-days' advantage in time when shipping to the United Kingdom."

#### PALESTINE THREATENS CITRUS MARKET.

##### Production Increasing.

The recent development of citrus production in Palestine under British mandate, is causing American producers some concern, and is changing the aspect of the world's citrus markets. Besides this, increases in exports are reported from British West Indies, Portuguese East Africa, Egypt, South Africa, Cuba and Puerto Rico.

While the imports of citrus fruits into the United Kingdom shows a steady increase, imports from U.S.A. are declining in relation to total imports. At present South Africa and Palestine are the two chief suppliers of British Empire-grown citrus fruits, but Palestine is extending the more rapidly and may be reckoned as the most serious competitor with U.S.A. on the European market.

#### GIFT ORANGES TO ENGLAND.

The Murray Citrus Growers' Co-operative Association announces a scheme for delivering cases of citrus fruits to any address in the United Kingdom, similar to the Christmas lamb scheme. Half-bushel cases of Navels will be delivered for 11/6, or an export case for 23/-. and orders will be booked either at the Association's Adelaide office or at the office of the Agent-General for South Australia in London. If supported as it should be by residents in Australia who have friends in Great Britain, the scheme should be a good advertising medium for Australian Oranges.

#### ORANGES LEAD.

U.S.A. Exports \$9,000,000 Fresh Fruit.

Statistics for 1935 show that U.S.A. increased her fresh fruit exports by

\$2,000,000 over 1934, and had the biggest season since 1931. Included in this increase were Lemons by 95 per cent., largely owing to a shortage of Italian Lemons, and Oranges by 64 per cent.

Besides increased shipments to Great Britain, exports increased to Belgium, Netherlands, Norway, Finland, France, Poland, Sweden and Switzerland, as well as the Far East and Latin America, 5½ million cases of Oranges, one million cases Grapefruit, and half million cases Lemons comprised the exports.

#### N.Z. EMBARGO RELAXED.

##### S.A. Oranges Accepted.

The N.Z. Minister for Finance announced on May 19 that Government had approved of the importation of citrus fruits from South Australia during June, July and August, up to 50,000 cases. The quantity stipulated was fixed in order to give Cook Islands growers a reasonable opportunity to market their product as they are practically dependent upon New Zealand for their market. If, however, the crop falls short of expectations, an increase of the quantity of S.A. Oranges may be permitted.

#### CITRUS BOARD WANTED.

##### 1935 and 1936 Export Bounties.

Amongst the many items considered by the Australian Council of Agriculture in a 2-days' conference held at Canberra on May 27-28 were two that are of interest to citrus growers.

The Council reaffirmed its previous decision that an Australian Citrus Board be established, and asked that steps be taken to that end.

It also urged that the Commonwealth make an early statement as to whether it would grant an export bounty to the citrus industry for the 1936 crop.

##### 1935 Bounty.

Under the provisions of the Prune Bounty Act, which was recently passed by Parliament, a bounty of three-farthings per pound is payable on Prunes exported from the Commonwealth during the year 1935.

The bounty is payable to the grower of the fruit, and the Act provides that applications for the bounty must be lodged with the Secretary, Department of Commerce, Canberra, on or before June 30, 1936.

Forms of application have been printed and arrangements made for distribution in Victoria and South Australia through the State Dried Fruits Board, and in New South Wales through the Sydney Branch of

#### AUSTRALIA SETS AN EXAMPLE.

Palestine citrus growers call attention to the support which the Commonwealth Government is giving to its citrus industry by giving export subsidies and guarantees, and their official journal, "Hadar" uses this action as an example for the Palestine authorities to follow. It is pointed out that the citrus industry in Palestine, although fast becoming one of the most important fields of primary production, is receiving no assistance from public funds and should any serious crisis be experienced it would critically affect the economic situation in that country.

the Department of Commerce. Growers of Prunes who have not already received application forms should apply to the authorities referred to in the States concerned.

Growers of prunes are advised to make early application for the bounty, and should note that, unless such applications have been lodged with the Secretary, Department of Commerce, Canberra, by June 30, they will not be eligible to receive the bounty.

#### A NEW LEMON.

##### Florida Develops the Perrine.

Called the aristocrat of the citrus world, a new Lemon is announced in Florida, U.S.A. It is said to be a cross between the Italian Lemon and the Mexican Lime. It was developed several years ago by Dr. Fairchild, of Homestead, Florida, and named in honor of Dr. Perrine, a pioneer in the citrus industry in that State.

The Perrine attains an average length of 2½ inches and maintains a uniform acidity content of 6.5, which is slightly higher than Californian Lemons. It has more seeds than the Californian Lemon and has a very thin skin. It has been found to be immune from withertip of the Italian Lemon and from scab of the Mexican Lime, and is therefore a distinct improvement on its crossed origin.

It is expected to become a popular American variety, and that by January next 60,000 trees will have been planted out. A crop of 25,000 boxes is anticipated in 1938, with a gradual increase to 300,000 boxes in ten years time.

For Sure-Croppers, Sturdy, Well-rooted

## FRUIT TREES

AT LOW PRICES IN

**Citrus, Summer Fruits, also Roses**

BUY FROM

**George McKee, Cumber Nurseries, Ermington, N.S.W.**

Established 1847 — First and Foremost Citrus Nursery in Australia  
Quality and True-to-name Varieties Guaranteed.

WRITE FOR 1936 PRICE LIST.

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# Successful Field Day at Kyabram Victoria.

## Manuring of Peaches Under Irrigation.

**STRIKING EFFECTS** from nitrogenous fertilisers on tree growth of Peaches under irrigation were seen by a party of over fifty orchardists during an inspection of a fertiliser experiment on Mr. C. R. Roper's property at Kyabram on May 20. This outing was arranged by the Kyabram Fruitgrowers' Association, whose President welcomed members and other visitors.

Mr. O. H. Gepp, B.Agr.Sc., in explaining the experiment, said that the treatments under test were:—

- A. 4 lbs. superphosphate.
- B. 4 lbs. superphosphate plus 2 lbs. sulphate of ammonia.
- C. 4 lbs. superphosphate plus 4 lbs. sulphate of ammonia.
- D. 4 lbs. superphosphate plus 4 lbs. sulphate of ammonia plus 2 lbs. muriate of potash.

Each treatment supplied the same amount of phosphate, while nitrogen was added in the form of sulphate of ammonia at 2 lbs. per tree in Treatment B, at 4 lbs. per tree in Treatment C, and at 4 lbs. per tree combined with 2 lbs. per tree of muriate of potash in Treatment D.

The yields excluding the "drop" ob-

tained in 1936, the second year of the trial were:—

- Treatment A.: 6 tons 8½ cwts. per acre.
- Treatment B.: 7 tons 2 cwts. per acre.
- Treatment C.: 7 tons 7½ cwts. per acre.
- Treatment D.: 7 tons 5 cwts. per acre.

These early yield figures suggested that an application of the equivalent of 2 to 3 lbs. per tree of sulphate of ammonia in the form of 1 and 1 (equal parts) super. and ammonia mixed fertiliser was the best fertiliser treatment for irrigated Peaches in the Goulburn Valley. In cases where superphosphate had been applied with a green manure crop in Autumn, an application of 2 lbs. per tree of straight sulphate of ammonia might be all that was required.

Continuing, Mr. Gepp said that from district growers' experience, Pears could do with more nitrogen than Peaches. Up to 4 or 5 lbs. sulphate of ammonia per tree could be applied to Pears with advantage. Applications should be varied according to

the vegetative growth of particular trees.

There had been some discussion on the question of fertiliser treatment in relation to brown rot infection. The consensus of opinion appeared to be that there were certain predisposing causes such as weather conditions, and shading of the fruit due to excessive vegetative growth which tended to aggravate this trouble.

Weather conditions, of course, could not be controlled, but excessive shading could be controlled by varying the quantity of nitrogenous fertiliser to suit the growth conditions of the individual tree, and by pruning to suit the individual case.

It must be realised that productivity of any plant, fruit trees being no exception, depended upon a nice balance of vegetative activity. An excess of vegetative growth was as troublesome as was lack of growth, both causing lack of fruitfulness. So far as the use of fertilisers was concerned, orchardists could help themselves by realising that the application of nitrogenous manures would increase vegetative growth. The skill in manuring lay in varying the rate of application to maintain a proper degree of growth. Thus the person applying the fertiliser should study the requirement of each individual tree, and give for Peaches,

say, one, two or three pounds of sulphate of ammonia according to size of tree and growth on the tree. General recommendations regarding quantities of fertiliser to be applied could only be a general guide to growers.

Mr. E. C. Cole, of the Horticultural Branch of the Department of Agriculture, stated that the experiment was of great interest to him, and its systematic layout should provide yield information of considerable value to the irrigation orchardist when further years' results came to hand. The figures to date, he said, substantiated similar trials on Peaches under non-irrigation conditions in southern Victoria.

Mr. C. R. Roper, on whose property the trial is being conducted, said that he was very impressed by the effects of nitrogen. He thought the trees which were not receiving nitrogen would become unproductive within a few years. He stressed the importance from his observations of an early spring application of sulphate of ammonia. He thought the best time to apply the dressing was a few weeks prior to bud burst. He stated that he was very keen on growing a good crop each year, and found that a mixture of oats and peas sown immediately after completion of picking was most suited to his conditions. He was unable to grow a satisfactory cover crop, however, without manuring with a mixture of superphosphate and sulphate of ammonia. He liked to apply about a bag to the acre of the 1 and 1 mixture for this purpose.

At the conclusion of the proceedings the Kyabram Fruitgrowers' Association was complimented upon their interest in the matter, and Mr. Roper was cordially thanked by all for the public spirit he had shown in allowing the experiment to be conducted on his property.

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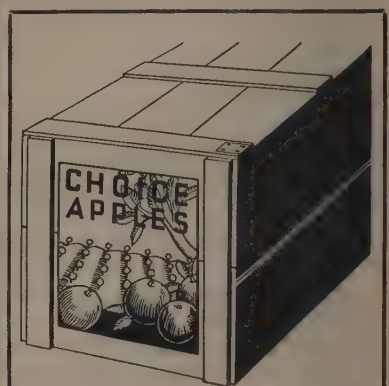
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# Apple-growers' Organization in Western Australia

MARKET REGULATION BASED ON STATISTICAL RECORDS OF VARIETIES.

POTENTIAL CROP INCREASES STILL CAUSING CONCERN.

NECESSITY FOR CONTINUED APPLE ADVERTISING CAMPAIGN.

Activities of Australian Apple and Pear Export Council Appreciated.

Sixth Annual Report of W.A. Apple Sales Board.

WESTERN AUSTRALIA is to be congratulated on having in its existence her Apple Sales Board. Some remarkably good work has been performed by this efficient voluntary organisation.

The Sixth Annual Report of the W.A. Apple Sales Board is a comprehensive document, and sets out in detail many vital phases of Apple culture and marketing in the Western State. In fact, the information will be of interest and value throughout the Commonwealth and New Zealand.

Summed up, the Apple sales Board obtains an accurate survey of the Apple crops, the proportions of the several varieties, the keeping qualities, and after allowing for the quantity to be exported, provides a quota system for the most effective marketing of the Apples in the State so that the growers shall reap the best financial returns.

Strangely enough, while the Board enjoys the confidence and goodwill of growers generally, and most of them follow the expert advice tendered as to the varieties and quantities to be marketed each week, there are some growers who refrain from operating on the uniform plan, apparently under the delusion that by so doing they will get ahead of the other fellow.

This psychological problem has to be overcome and the growers who are marketing outside the organised plan are not only receiving less money than they would get if they fulfilled the Board's advice, but they are working against the interests of their fellow growers.

It is hoped that this problem will be overcome, as other problems have also been overcome in bringing the organisation to its present stage of efficiency.

## Outline and Summary. 1935 Season.

**Crop:** A record crop was experienced in 1935.

**Export:** This also created a record; the State was exceptionally fortunate in the accidental occurrence of factors favorable to increased exports.

**Cool Stored Quantities:** The balance held in cool stores at June 30, 1935, was excessive, and significantly ahead of early estimates.

The total included: A very necessary reduction in Yates.

A substantial increase in Granny Smiths.

A very excessive and embarrassing increase in varieties suitable only for short storage. Growers' attention was specially drawn to the position, but a big proportion of holders ignored its significance.

**Marketing Experience:** Clearances in the early months were much too slow.

This resulted in a record surplus for marketing from mid-November on,

especially of eating Apples; despite very favourable sales factors, prices in that period suffered severely. The January market revealed an entire absence of significant demand.

Apart from the last month, values generally were much better than might have been expected, indeed in some instances prices ran higher than the stock position justified, thus checking demand.

Had orderly marketing been carried out, very much better results could have been assured. Growers who followed the regular clearance advices showed a very substantial gain over those who followed their individual ideas.

### General:

The season produced unexpected evidence of a severely diminishing demand for Yates.

Condition and presentation were better, but much more general attention to these aspects is imperative.

### Production:

The increase of production arising from abnormally increased plantings in recent years is a matter for serious concern. A halt in expansion is imperative until definite evidence of substantially improved absorption can be found.

### The Season Reviewed.

The 1935 Apple crop was a record, despite the fact that the preceding (1934) crop was the third heaviest for the State.

The 1935 crop of 1,228,300 bushels could have led to disaster, but for (a) the fact that W.A.'s export quota was raised from 450,000 cases to 598,029 cases. Additional export outlets accounted for 261,434 cases, thus creating an aggregate export of 859,463 cases; (b) The late British markets, owing to several factors, were favorable for Australian growers.

However, the necessity for the regular export of late varieties, especially Yates, is very insistent.

**Cool Stored Quantities:** Despite earlier assurances that the quantities to be stored for local marketing would

be light in relation to earlier forecasts, the actual figures, when compiled, showed the opposite, thus:

Varieties.	Average.	1931-33.	1935.
Yates .. .. .	33,300	25,000	
Granny Smith ..	18,300	29,000	
Rokewood .. . .	4,800	5,000	
Other varieties ..	26,000	38,000	
		82,000	97,000

The excess of 14,000 was despite a reduction in Yates stored of almost 8,000 cases, i.e., the increase in all other varieties was practically 23,000, or nearly 50 per cent. of the 1931-33 total of such.

It is estimated that at least 30,000 cases of Yates were shipped in excess of average, due solely to the abnormal United Kingdom demand. It will easily be recognised therefore that the absence of such special demand and consequent storage here of that added quantity of Yates would have created a hopelessly unprofitable position.

Since comparisons with the extraordinary conditions and unprofitable results for 1934 are misleading, it is necessary to go back to the period 1931-32-33 to get a true basis of comparison. The highest total stored prior to 1934 was a little over 88,000 cases; the average for the period quoted was approximately 82½ thousand cases.

This season's experience has proved again that quantities in total in excess of 90,000 cases must result in depression of values. As related to this it may also be borne in mind that a survey of quantities shed-stored suggests that the totals of these were very much less in 1935 than in corresponding periods of recent years.

**Varieties:** The only pleasing feature in relation to this position was that the total of Yates stored showed a reduction for the first year for some considerable time. An increase of approximately 11,000 cases in Granny Smiths, although contrary to forecasts, did not create any embarrassment. This increase in the total of Granny Smiths more than compensated for the reduction in Yates, but an adjustment of that nature would of itself have left a very satisfactory position indeed from the standpoint of quantities in relation to market demand and probable results.

Unfortunately, the major increase was in respect of varieties outside the main long storage varieties. Under this heading the increase was no less than 12,000 cases, and it is still beyond our understanding that in so many instances substantial quantities of lines which are definitely not suit-

## HIGHLIGHTS OF THE REPORT.

The value of the complete statistical review of the Apple crop is clearly apparent.

There is urgent necessity for the continued export of late Apples, especially Yates.

The holding in store of varieties not definitely suitable for late marketing is discountenanced.

Bulk loading is part of the programme, and this saves the growers much money.

The advertising campaign revealed a stimulated demand for cooking, not eating Apples.

Yates are being overproduced unless satisfactory markets can be found abroad.

Granny Smith is displacing Yates in popular favor.

Growers who did not fulfil the Committee's recommendations for marketing certain varieties at stated periods, and those who sold to speculators at low prices for storage, caused embarrassment to the orderly marketing plans.

The selling of Apples by count instead of weight is a long overdue reform.

Bulk loading saved the growers nearly £700.

Continued Apple advertising is a necessity.

The services of the Australian Apple and Pear Export Council in improving overseas export and grading for local markets are warmly esteemed.

able for late storage, and which are not competitive in respect of the late market, should have been held in store; this especially in view not only of our repeated warnings but of the unsatisfactory experience in relation to these in preceding years.

It is scarcely possible to attach too much importance to the fact that it is a duty of the industry to ensure that fruit is marketed as nearly as possible whilst it is in the best of condition. Yet in this season we found early 2,000 cases of Jonathans held for sale after June 30 and over 5,000 cases of Delicious, many of which were still held for sale even after September 30. It may be true that odd lines of Delicious are quite capable of long storage, but it is absolutely certain that by far the bulk of the Delicious are much past their best if held in cool store for any extended period. Despite the disastrous experience suffered by many growers in respect of stored Dunns in previous

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288a Rundle Street, Adelaide.



years, the total this year was actually greater by approximately one-third, whilst Cleos were almost double in quantity the total held in 1934 and five times that held in 1933.

Mention of these varieties is made by way of illustration and emphasis. It is quite recognised that some of these may be suitable for short storage and for marketing early in the period with which we are concerned, but storage to the extent indicated herein is certainly not justified, and has the effect of retarding the clearance of other lines whose outlet is essentially the late market.

**Marketing Policy.**—The State Apple crop position was circulated to cool stores, and published in the country press, also details of the special roster for clearance of the several varieties. The lack of response to the Board's requests for regulated quantities to be marketed caused surprise and regret.

Since the lines which should have been marketed in July or August, and others which should be marketed

not later than the end of September constituted such a big proportion of the total, it was considered necessary during the early part of the season to lower the clearance rate which would normally have been arranged then for some of the longer storage varieties in order to clear the excessive quantities of short storage varieties.

At the conclusion of the season, these marketing recommendations were reviewed in the light of what actually transpired; these records show that the growers would have received more money for their crops had the advice been followed.

**Marketing Experience.**—While many districts loyally responded to the Committee's plans (and benefited thereby), others refrained, and many trucks were short loaded, or not despatched at all.

The inevitable result was that as the season progressed the surplus was not being progressively reduced.

Taken at October 5, 1935 the stocks stood at 46,000 cases, i.e., 14,000 cases higher than the corresponding date

of previous years; in other words, the surplus had been reduced in three months by only 600 out of 14,600 bushels.

By the second week in November the remaining stocks were heavily in excess of the total at corresponding date in 1934. At June 30, 25,000 Yates were in store (less than half that of 1924). At November 30—5 months later—when clearances should have been practically completed, 7,000 cases were held, as against 4,500 in 1934.

This position would probably have been avoided, but for the fact that a lot of the fruit was under speculative control.

The net result was that Yates realised in December what they had brought in July, and had borne storage costs for five months.

The prices would have been lower but for two factors:—(1) There was no hot weather up till Christmas time, thus Apple consumption was maintained; (2) The ripening of the stone fruit crops was a week to 10 days later than usual.

The Committee emphasises:—(1) That the marketing of cool stored fruit, especially eating Apples, should finish by Christmas; (2) That very little fruit can safely be held after November 30.

Also, many Jonathans, Delicious, Cleos and Dunns were stored longer than their most effective marketing period.

**Eating v. Cooking Apples.**—One of the most disturbing features was the decreased demand for eating Apples, especially Yates. The advertising campaign revealed a stimulated demand for cooking Apples. The 1935 season emphasised this feature to an extent that was certainly not anticipated.

The advertising campaign revealed a stimulated demand for cooking, not eating, Apples.

Granny Smith seems to have displaced Yates in popular favor. With Yates, the marketing capacity locally seems to be not more than 25,000 cases, thus the production is far above safe limits, unless a profitable market can be found overseas.

After allowing for the popularity of Grannies on export markets, there may be an increased tendency for growers to store more of this variety for local sale. Increased quantities may cause prices to fall; at the same time even lower rates for Grannies are likely to be relatively satisfactory in comparison with other varieties.

Two factors thus arise:—

(1) The increase in quantity of one variety will result in the displacement of other varieties, to the detriment of varieties less popular.

(2) Further publicity efforts are essential to ensure increased consumption, and increased consumption must be aimed at by an orderly system of regulated marketing, to provide the public with regular supplies of good quality fruit, and with a stability and range of prices which will prove attractive, and thus maintain demand.

**Orderly Clearances.**—This is one of the main objectives. Where the Committee has not been able to effect orderly clearances, the responsibility does not attach to all growers. In very many instances growers fulfilled the Committee's recommendations without question, and thereby benefited. But some sections of growers ignored the Committee's advice—a comparatively small section, and very largely in one district.

Such growers may imagine that because the bulk of the growers are likely to work to the Committee's plans they may individually benefit by taking a different course. They may imagine that because the Committee is trying to get certain varieties marketed, they, by withholding these varieties until others are cleared, will gain an advantage.

Experience every year has shown that attempts of this sort are negative in their results, and at the same time embarrassment to the whole plan is caused.

Another factor is that of growers selling to speculators at low prices, then, late in the season, when storage charges have accumulated heavily, the purchasers of this fruit can scarcely have shown a loss, while the growers concerned have thrown away all the profits which they might have been expected to secure by maintaining personal ownership of the fruit.

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These operations tend to increase the quantities stored to give the operators their legitimate profit.

There is only one way to maintain the late market at reasonable levels, and that is by retaining for storage only such total quantities as can profitably be disposed of.

**Condition and Presentation.**—Generally speaking, the fruit stored well, and the out turn was satisfactory—with the exception of some Jonathans, Cleos, Romes, and Delicious that were stored too long. The practice of thinning improved the Yates.

The presentation of the fruit showed distinct improvement. Some lots however, were "shocking," and revealed carelessness.

To increase demand there is necessity for continued advertising to make people "Apple minded."

#### Selling by Count Advocated.

In concluding this section of the report, the Committee states:—

"In our view it is a pity that eating Apples at least are not sold by number rather than by weight, for there is every reason to believe that greater quantities would thus be consumed.

#### General Observations.

Bulk loading saved growers between £600 and £700.

Country meetings at the request of the growers were held at Donnybrook, Bridgetown, Boyupbrook, Kendenup, Mt. Barker, and Albany.

#### Advertising is Essential.

Continued Apple publicity is a necessity. The minimum amount needed is £200. The scheme provides for a levy of 3d. per case cool stored after July 31 (or such later date as may be determined).

Whatever success may be achieved it must be remembered that the basis of increased consumption must be that of confidence in quality and grade, and this responsibility rests on each individual grower.

The efforts of the Australian Apple and Pear Export Council to improve grade standards and to develop the local market are esteemed.

#### The 1936 Season.

The official estimate of 1,100,000 cases of Apples seems likely to be fully achieved, and may be exceeded. The 1935 crop (a record), was 1,228,000 bushels. The annual average production for five years, 1929-1934 was 800,000; thus this year's estimate shows an excess of 300,000, or 37½ per cent.

**Apple Export.**—It is very pleasing indeed to observe the changed outlook for overseas export, in contrast with apparent prospects only two years ago.

That this has resulted mainly from improved standards of presentation, and also from the rationing of the U.K. market is not questioned. The steps taken through and by the Apple and Pear Export Council in these directions have therefore been tremendously worth while.

#### Apple Production in W.A.

Facts to be faced are these:—

Export to the main overseas mar-

ket (the United Kingdom) is definitely limited, and no significant expansion there is apparent.

There is no significant potential increase in other export markets, nor to other Australian States.

W.A. has a very limited population, and much of it is difficult of access.

#### Relation of Export Quota.

Whilst this State must reasonably expect some adjustment of the State export quota in relation to increasing production, it must be borne in mind that quota shipments represent only about 40 per cent. of production. Unless, therefore, adjustment of the State quota to increased production were secured in a heavier proportion, it follows that for every increase of 100,000 cases in production, a maximum of 40,000 cases would find a United Kingdom outlet in contrast with 60,000 with no visible market.

Whilst it is hoped that other States will be willing to recognise the special problems of Western Australia in this regard, it must also be borne in mind that any such adjustments are necessarily reflected in reduced outlets for such States themselves, and, moreover, many of these are facing problems of increasing production, even though on a lesser scale.

That this phase of the problem is really serious here will be apparent from the following figures:—

The latest census figures show that this State has 3,832 acres of non-bearing Apple trees, in relation to 8,617 acres of bearing trees, i.e., non-bearing area represent 45 per cent. of the bearing area. As the average crop for 1934-36 (inclusive) has been over 1,100,000 cases, this means that if the new areas bear only as heavily as the average of the bearing areas,

#### Increased Annual Production

of approximately 500,000 cases must be anticipated. Terrific as this may seem, it is probably conservative, for it is well recognised that most new areas are better chosen and prepared than the average of old plantings, and, more significant still, most new areas are of varieties which bear very much more heavily than the average of older plantings.

Some folk have endeavoured to seek refuge from these facts in a suggestion that new areas will only serve to compensate for areas going out of production. The answer to that argument is in the fact that from 1928-29 to 1933-34 inclusive (six years), the area planted in excess of acreage which went out of production is no less than 2,253 acres—practically all of this has yet to come into bearing.

We therefore feel very fully justified in again drawing the special attention of growers to the following resolutions carried by the last Apple and Pear Export Council meeting:—

"This Committee views with alarm the steady increase of Australian Apple production, and considers that such may easily effect any benefits achieved by organisation; that the Council be requested to consider what steps should be taken to safeguard

this angle; and that it be requested to draw the attention of growers in its report to the dangers of this position.

"That it be a recommendation from this Council to the State Governments that further plantings be discouraged until such time as the home markets of the Commonwealth have been rehabilitated."

#### Recommendations for 1936.

The shed stored Apples should be cleared early. Short period storage varieties should be marked seasonably; it is an error to attempt to keep them too long.

Good quality is a prime necessity. Hence growers are urged to:—

Pick at the correct stage.

Pack only good fruit

Of even grade

In a case true to size

And fully packed.

The report concludes as follows:—

#### Marketing.

"Above all we ask that every grower will genuinely support our efforts for orderly marketing. We believe that our six years of service have demonstrated the reasonableness of our ideas and the general soundness of our judgment.

"It is with this background of successful honorary service that we appeal to all to give attention and respect to these recommendations, and then to leave the clearance of their lots to be dealt with in accordance with both our general and our specific recommendations.

"Regulated clearances, properly related, both to the stock position and to the trend of demand are the very essence of orderly marketing, and they necessitate a wide measure of real support and confidence.

"We believe that this intelligent attempt at orderly marketing is really worth while. The Committee is fully willing to serve with this object, and with a broad-minded approach to every problem.

"But, to achieve success and to make the endeavour worth while, they must have both effective support and reasonable absence of hindrance.

"Our very best wishes are extended to every grower with the belief that continued and united efforts are essential to prosperity, and that such must surely win out.

"For, and on behalf of the Marketing Committee of the Apple Sales Board,"

H. W. SOOTHILL,  
Hon. Secretary.

#### The Apple Sales Board

is a registered and responsible body, constituted of:—

Mr. A. C. R. Loaring, Chairman of Directors, Producers Markets Co-operative Limited (Chairman); Mr. J. Thompson, General Manager, The Westralian Farmers Ltd.; Mr. A. P. Sharpe, Chairman of Directors, Bridgetown Branch, The Westralian Farmers Ltd.; Mr. J. McNeil Martin, Chairman of Directors, Mt. Barker

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The Executive to the Board includes:—

Mr. C. W. Harper (Chairman); Mr. A. T. Booth, Manager, Mt. Barker Fruitgrowers' Cool Storage Co-op. Society Ltd.; Mr. D. Ogden, Manager, Albany Branch, The Westralian Farmers Ltd.; Mr. F. Simper, Fruit Department, The Westralian Farmers Ltd. (representing Mr. J. Thomson); Mr. H. W. Soothill, General Manager, Producers Markets Co-operative Ltd.; Mr. D. C. Thomson, Manager, Bridgetown Branch, The Westralian Farmers Ltd.

The Marketing Committee is constituted as follows:—

Metropolitan Members.—Mr. T. Price, Managing Director, Illawarra Orchard Ltd., Karragullen (Chairman); Mr. W. Berryman, representing Berryman and Langley Ltd., Perth; Mr. R. M. Carter, Manager, Fruit Dept. Paterson and Co. Ltd., Perth; Mr. F. W. Lantzke, representing F. W. Lantzke, Perth; Mr. M. Scanlon, representing Scanlon and Simper Ltd., Fremantle; Mr. F. Simper, Mr. H. W. Soothill.

Country Members.—Mr. A. T. Booth, Mr. J. Cross, Secretary, Argyle Fruitgrowers' Association; Mr. D. Ogden, Mr. D. C. Thomson.

Mr. H. W. Soothill is the Honorary Secretary of the Board, and of the Executive and Marketing Committee. Mr. D. J. Sutcliffe, Hon. Assistant Secretary; Mr. F. A. Jaggard, Hon. Accountant.

#### MANURE SUBSIDIES.

The closing date for applications for artificial manure used in the year ending June 30, 1936, has been extended to December 31 this year. The subsidy of 15/- a ton will be payable on quantities of not less than half a ton of artificial manure used by June 30.

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# South Australia.

Some Economic Considerations — Old Files of the "Fruit World" Reviewed and Appreciated — The Long Continued Fight Against the Codlin Moth and Failure of Parasitical Control — Renmark An Air Port — Salt Problems in Irrigation Water — Successful Tobacco Culture — Favourable Opening of the Orange Season

(By Our Special Correspondent.)

Renmark, May 18, 1936.

**A** SIGNIFICANT INDICATION of how the political life of Australia is becoming dominated by the influence of secondary industries, lies in the fact that at the time of writing, the Federal Parliament is seriously considering the introduction of a 40 hour week. The greater part of our secondary industries being protected by import duties, render the cost of manufactured articles more or less dependent on the cost of labor. If labor costs increase, the extra cost is passed on to the public. In the event of a 40 hour week being introduced into secondary industries, I wonder how long it would be before the primary producer is forced to

abide by the accepted law of the land and be compelled to engage labor at a 40 hour weekly basis.

How many men on the land would gladly accept a regular wage, an income of a known quantity, including a 40 hour week, rather than having to fight pests, adverse weather conditions, and work a 60 hour week, at certain times of the year, only to find an increased overdraft at the end of the financial year. Surely this is a topsy turvy economic existence. Agricultural implements have already been subjected to an increase in price by the manufacturers, who have been compelled to adopt a shorter working week.

The statement has so often been

made that we are rapidly recovering from the depression years, that it is believed by the unthinking public, but the majority of our primary industries have still a long way to go before being "out of the wood." And after all, the prosperity of a nation depends on the stability of its primary industries, and not on the development of secondary industries.

The writer has been given a pile of old files of the "Fruit World," about two feet high, and has had a great deal of enjoyment, delving into these copies, some of which date back to 1904. We don't know how long our good friend Mr. Boardman has been associated with this paper, but his record, together with a short history of the development, should make interesting reading. For instance, looking over the copies during the war period we discover that paper of the quality used in this publication must have been extremely scarce. First, in 1916, a few pages of the newspaper type of paper appeared, which later increased as the war progressed, until the whole paper was

printed on the coarse type in 1918, and is now yellow with age.

In the pages of the 1904 copy, the friend from whom I received the file, had pasted an extract from an American paper relating how Mr. Geo. Compere, Government Entomologist, of Western Australia, had brought over a wasp which acted as a parasite to the codlin

grub and was hailed as the deliverer of the Apple grower. The wasp was found in Spain, where it was reported to have worked satisfactorily.

All through the years the fight against the codlin moth has been going on, but up to date nothing like control by parasitical means has proved effective.

Last year we discovered a wasp in Renmark very much in appearance like the above mentioned wasp. It certainly took toll of the grubs, but its tastes were very cosmopolitan, and took any other kind of worm which happened along and did not confine itself exclusively to the codlin grub and could not be considered of much economic value. Later on in the fight we find the discovery of the parasite in England by the name of Trichogramma Minutum, three distinct races of which were brought out here to Australia for research work on the codlin pest.

Although laboratory tests seemed to have been satisfactory, under field conditions, however, it proved ineffective, and has now been dropped altogether. So here we are in 1936, still fighting the pest. It is interesting to note in the 1904 publication one of the sprays recommended for codlin being Paris green and lime, while two others are also advocated, white arsenic and lime, and white arsenic and soda crystal. It must have been about this time when arsenical sprays were first introduced.

In the 1906 copy of June we find a lively account of a meeting of growers at Doncaster to amend the Act which prohibited the sale of codlin infested fruit. Those who took part in the discussion were Mr. Tully, Mr. Petty, Mr. Cronin, Mr. Davey, Mr. Kennedy, Mr. Thiele, Mr. Sell, and a lively meeting it was to all accounts.

In 1916 we find another account of an engaging meeting held at Huon, Tasmania. The Huon councillors discussed at length the possibility of making spraying for codlin moth compulsory. Judging from the general discussion, there were then many orchards quite free from this pest. What have the intervening years brought?

Two photos. in the issue of April, 1916, show first a Cleopatra Apple tree in the orchard of Mr. Roch, at Harcourt, yielding 12 bushels under irrigation, and the other of a 23-year-old Stone Pippin Apple tree on the Mount Barker Estate Orchard of W.A., yielding 16 bushels of fruit. June, 1916, a fine photo. of an Apple

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Apart from being the most efficient winter-spraying oil, SHELL P.C.S. is also the lowest-priced. Obtain full particulars of SHELL P.C.S., SHELL RED SPRAY and SHELLICIDE "D"—without delay—from The Shell Company of Australia Limited.

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**SOUTH AUSTRALIA (Continued).**

tree in Mr. Smith's orchard at Deepdene.

It would be interesting to know what the last 20 years has done for these trees, and these men on the land.

In going through these old copies of the "Fruit World" I could not help being impressed with the sincere regard this paper has always had for the fruitgrower and the way in which it has kept up its unabated interest in any forward movement for the benefit of its readers.

Now for our own part of the world.

**Renmark an Air Port.**

Renmark has been put on the map in regard to aerial transport, and now constitutes an air port, on the route between the cities of the Commonwealth. It was a big day when the opening ceremony took place, and planes came from Parafield and Laverton. In all, some 14 planes circled the skies, wheeling, flying in formation, looping the loop, bombing a moving car with bags of flour, bombing the centre of the field with the same substance. The whole countryside from all irrigation settlements and farming areas came to witness this thrilling spectacle.

**Salt Problems.**

For some time past the Irrigation Trust of Renmark (the body which distributes our irrigation water), have been concerned about the saline condition of our irrigation water, and particularly that which supplies the Block E area. In a thorough investigation of the cause, it was found that a salt spring came bubbling up through the main supply channel and caused excessive salinity of the irrigation water. This and many more of these springs constitutes the natural drainage getaway of the Block E lands, many of which find their way through seams of sand to the river, but in this case, when the channel was formed, it cut through one of these sand seams, and has been accumulating an exceedingly large amount of salt water.

A meeting of ratepayers was called to approve of the Trust's scheme of concreting all earthen channels in the settlement at a cost of £35,000. The chairman, Mr. C. H. Katekar, pointed out that the work would take several years to complete, and that a great saving in channel cleaning would ensue by having earth channels concreted. The present supply source from No. 1 pump to No. 3 pump would be altered, so as to obviate the necessity of utilising what is known as the "Reservoir" as a supply basin. This reservoir forms a natural basin, and is low-lying; in years gone by this was known as Salt Creek, and there seems to be little doubt that this too, has been carrying the natural drainage waters from adjacent blocks.

This movement on the part of the Trust to make a concrete supply channel connecting these two pumps will ensure a supply of irrigation water fresh from the river.

It is only in the past few seasons that an active interest has been displayed in the salt content of our irrigation water, and it has revealed some rather startling facts. Suffice it to say that the ratepayers have agreed to a levy of an additional 5/- per acre to enable them to get the water as free from solids as is humanly possible.

**Successful Tobacco Culture.**

Last season an attempt was made by several growers in the Loveday and Barmera irrigation areas to grow tobacco, and the result has been entirely successful. Tobacco leaf has also been grown at Lyrup and Berri, and has shown itself to be of good quality. Under the guidance of Mr. R. E. C. Giles (Tobacco Instructor), growers have gained a good deal of experience which will be of great assistance to them for next year's planting. The curing of the leaf is now completed, and shows a very attractive light type of product.

Mr. W. J. Osborne, who has had several years' experience in W.A. and in the South East of S.A. treating tobacco leaf, was in charge of the curing barns, and expressed his opinion that it was equal to the best leaf grown. Some years ago an eminent soil specialist told the writer that in Australia could be found every type of soil suitable for the production of tobacco leaf equal to that of any in the world. Then why are we not growing it? Science has now effectively obtained control over the great scourge of blue mould, by the benzole treatment, and it seems evident that given proper encouragement, our primary producers would soon be in a position of supplying the whole of our smoking requirements.

**The Orange season**

has been particularly early this year and shipments have been made before May 1. The long dry and warm spell, with occasional frost dating from the end of April, has hastened ripening. The fruit is well colored and possesses the required amount of sugar to make it quite palatable. One feature noticed with an occasional Orange is the particularly deep coloring, which makes itself conspicuous at this time of the year, and in each case where this deep coloring has taken place, the fruit on being opened, displays a mould growth just under the skin.

The reason for this I put down to the unseasonal conditions which prevailed during the January monsoonal rains. This rain, which continued intermittently for about ten days, accompanied by humid conditions, seems to have entered the navel end of the fruit, after which the mould spores developed gradually.

It is an unusual feature with our fruit to develop mould without any apparent cause, as the fruit shows no outside indication of inward mould. The fruits examined seem to indicate that the larger the navel, the more prone the fruit is to have developed this feature. It is not of serious proportions, but anything of an unusual occurrence makes us look for a cause. —"Nemo."

"Here's an account of a girl who climbed to the top of a high mountain and then sang several songs."

"She had some sense. They are not all so thoughtful."

**CENTRIFUGAL PUMPS**

2 in. rated at 5,400 gallons per hour, £5/10/-

3 in. rated at 9,000 gallons per hour £8

**PIPING, per 100 ft.:**

3 in., 28/6 1½ in., 70/-

1 in., 39/3 2 in., 93/3

1½ in., 55/-

all F.O.R. Melbourne.

Also Circular Saws, Saw Spindles, Pulleys, Beltings, etc.

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**SOUTH AUSTRALIA.**

REVIEW OF THE 1936 EXPORT SEASON — By H. J. Bishop.

SOME INTERESTING comments re the South Australian 1936 Apple and Pear export season are to hand from Mr. H. J. Bishop, President of the South Australian Fruit Marketing Association as follows:—

**Prospects.**—The early season prospects were excellent, and crops set well. Last year's late rain had left the trees in good heart.

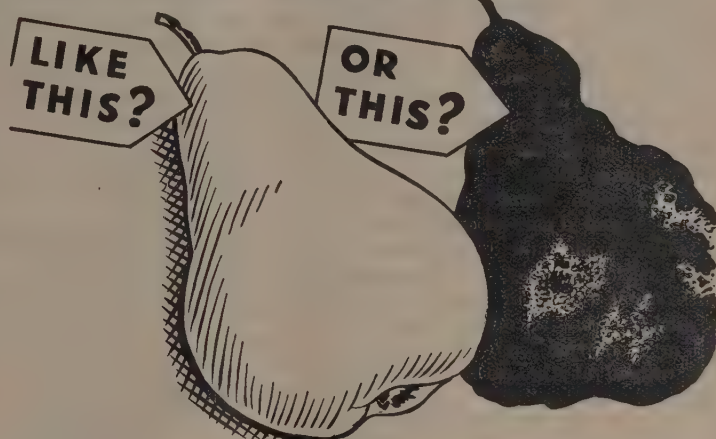
**Setbacks.**—The continued damp weather through the spring, and, in fact, almost to December, caused a bad visitation of black spot. This was very hard to check, and reduced the exportable quantities probably 45 per cent.

**Estimate of Crop.**—The quota allowed to South Australia for United Kingdom was 252,569 cases. The first freight applications totalled 750,000 cases. This is an indication of what the crops may have been if the

black spot, etc., had not caused such heavy losses.

**Exports.**—The season was abnormally early. Usually Apples are not matured in any quantity until the first week in March. This year exports totalled 85,000 cases prior to the end of February. Quantities exported were:—February, 85,000 cases; March, 194,000 cases; April, 141,000 cases. In May, 10,000 cases are likely to be forwarded. Probably the total quantity exported to Europe will approximate 430,000 cases. The United Kingdom took 318,000, and the Continent 112,000.

**Freight Space.**—The time of the February shipments coincided with wool sales here, and therefore no trouble was experienced in that month. Much inconvenience and loss of business was caused by shipping com-

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There are many reasons why you should ship your perishable produce—particularly pears—through Southampton, England's most modern port. Here are some of them:—

London is reached by express freight trains in three hours from Southampton. That means that all fruit unloaded in Southampton to-day, will be at Covent Garden, Spitalfields or Borough Market for the early morning market to-morrow, which means days saved as against fruit discharged by ships calling at Continental and other outports first.

The slight additional cost in reaching London markets is altogether outweighed by the tremendous advantages of days saved.

Deterioration is avoided by special arrangements for sorting to mark, and quick refrigerated trains direct to London.

Southampton cold stores available for storage of produce for local consumption or Midlands deliveries. Pears can be discharged from ship to cold store in less than 5 minutes, again obviating chance of deterioration.

Before the next exporting season, give serious consideration to these advantages, and when arranging space allotments for London Markets, ask for Southampton Discharge.

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panies through the O.S.R.A. rationing and advising space for one month only at a time, and thus not giving any opportunity for making forward sales. Arrangements for modification of Continental forward space were also inconvenient for sales.

**Quality Reports.**—The Agent-General's Department in London is arranging for an inspection of fruit on arrival of vessels, and prior to the fruit leaving the wharf. The reports to date are very satisfactory.

**Pears.**—As with Apples, the quality of Pears was seriously damaged with

Black Spot. This reduced quantities very considerably. South Australia has not, in the past, shipped many Pears, but quantities should increase. It is necessary, however, that a fair and reasonable proportion of space available during March be allocated to South Australia. This has not been done previously. Mid and late April is too late, and many Pears got over-ripe before space for its carriage became available, and accordingly could not be shipped. Quantities shipped to the end of April approximated 24,000 cases only.

## South Australian Fruit Marketing Association, Inc.

The monthly meeting of the Executive of S.A.F.M.A. was held at Adelaide on April 24, 1936.

There were present Messrs. R. O. Knappstein, R. G. Hannaford, H. N. Wicks, A. O. Petersen, A. G. Strickland, R. A. Cramond, J. B. Randell, M. G. Basey, F. B. James, R. S. McDougal, A. R. Willmore, and the Secretary. Apologies from Messrs. H. J. Bishop, S. M. James, M. Vickers. In the absence of the President, Mr. J. B. Randell occupied the chair.

### Correspondence.

**Victorian Fruit Marketing Association.**—Letter of March 5, re "Grade Standards" for local fruit marketing was further considered and deferred for consideration at a later date.

Letter from Royal Agricultural Society, dated April 1, expressing thanks for the donation of £2/2/-, to provide a trophy for Junior Apple Packing Competition.

**Commonwealth Bounty on Export of Apples and Pears.**—Letter from Australian Apple and Pear Export Council enclosing copy of Commonwealth Apple and Pear Bounty Act, and advising that a copy of regulations in connection therewith, would be forwarded at the earliest opportunity.

Also letter from the manager, Government Produce Department, dated April 23, advising that the Minister of Agriculture has appointed the following Committee to allocate the Commonwealth Bounty on the Export of Apples and Pears from the Commonwealth:—Messrs. G. A. W. Pope, Government Produce Dept., J. B. Randell, H. N. Wicks, A. O. Petersen, J. Turner, A. J. Chapman.

Also quoting sections 4, 5, 7, and 11 of the Act, which set out "That the Bounty will be payable on the basis of fourpence per bushel case of Apples and Pears, and shall be payable to the grower on the quantity of

Apples and Pears certified by the prescribed authority to have been exported by or on behalf of the grower."

The Committee will be called together immediately to take the necessary preliminary steps, and the matter will be prominently advertised, and all growers must make application before June 30, 1936.

Exporter members are asked either to supply the Committee with the names of the growers they obtained Apples from in 1935, or advise their growers to make application.

### Apple and Pear Export Council Conference.

Letter from Mr. H. J. Bishop, re appointment of sub-committee to make arrangements for entertainment, etc., of delegates, and suggesting that the committee appointed should meet as early as possible.

On the motion of Mr. P. R. B. Searcy, seconded by Mr. R. O. Knappstein, it was resolved:—

"That the sub-committee should consist of five members, as under:—

Messrs. H. J. Bishop, R. S. McDougal, representing shippers; Messrs. J. B. Randell, H. N. Wicks, A. O. Petersen, representing growers.

### Research Sub-Committee.

Mr. H. N. Wicks reported that at the meeting of the Research Sub-Committee they had discussed the question of altering the conditions of selection of fruit for the Orient Trophy, and suggestions had been made to the Royal Agricultural Society, and it was proposed to follow this matter up, with a view to having a different method adopted in the future.

Mr. Knappstein had submitted a Codlin Moth Control Chart, covering the period from October 18, 1935, to January 15, 1936, showing four peak periods, and a general discussion had taken place in regard to Pear Diseases, grafting, etc.

## Fruit Transport by Sea To Interstate Markets

IN REFRIGERATOR or COOL, WELL VENTILATED 'TWEEN DECK specially adapted for Fruit Carriage and fitted with powerful Electric Fans.

### FAST MODERN PASSENGER VESSELS

Sail every Wednesday and Saturday for Sydney and Brisbane.

Sail every Saturday for Townsville and Cairns.

CARGO VESSELS sail Weekly for Sydney and Brisbane (Tuesdays).

### SPECIAL REDUCED RATES OF FREIGHT.

FURTHER INFORMATION, SAILING DATES, ETC., WILL BE GLADLY SUPPLIED ON APPLICATION TO THE UNDERMENTIONED COMPANIES AT MELBOURNE:—

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# TASMANIA

HARVESTING COMPLETED AFTER A TRYING SEASON — PACKING CLASSES NOW IN FULL SWING — ORCHARD HYGIENE PRACTICES — BROWN ROT PREVENTION — NEW INTERSTATE GRADING REGULATIONS.

Hobart, May 13, 1936.

**A** SUMMARY of information received by the Chief Horticulturist (Mr. P. H. Thomas), from the District Orchard Inspectors, together with other information relevant to fruit culture in Tasmania is as follows:—

Excellent conditions for harvesting fruit have continued throughout the past month, a complete contrast to the same month last year, when over eight inches of rain were experienced in many of the main areas, and late spot was taking a heavy toll of some varieties. The actual rainfall registered was not far short of the average for April, but the ground was so parched and dry prior to this that little benefit was obtained. Heavy winds were experienced in many parts at intervals during the month, and damage to later varieties was reported from the Channel district.

The bulk of the fruit is now harvested, and by the middle of the present month (May) it is anticipated that most orchards will be cleared. As would be expected, the quantity of fruit held in growers' sheds is considerably less than last year, and cool stores also report reduced bookings. Wastage through spot and other causes has, in some instances, turned out greater than estimated, whilst the rains during the month did not affect size to any marked extent.

**Packing classes are in full swing, 32 schools being now under instruction.** The pupils are reported to be particularly keen, and many of them are already showing promise of future proficiency. This should ensure a very keenly contested struggle for the W. H. Calvert Shield.

### Orchard Hygiene.

Now that the season is drawing to a close, growers will be able to turn their attention to other matters connected with orchard management. Under this heading might be mentioned the removal and destruction of codlin moth bandages, and bark scraping around the butts of the trees, to expose and kill pupating larvae.

All diseased limbs, grafts or trees may now be conveniently removed and burnt; this early removal will ensure that no fructification will be formed, or spores produced and disseminated during the months prior to the completion of pruning. The wounds created should be smoothed off with a knife and painted over with coal tar or food paint. During the past 12 months tests have been carried out by the Department with more penetrating protectives and success has been obtained with the following:—Bichloride of Mercury 1-500, zinc chloride solution (43 per cent.), and these do not retard the evaporation of sap in early spring and subsequent drying up and healing. Further information upon these and other protectives will be made available next month.

Apricot growers who experienced even minor outbreaks of brown rot last season should pay special attention to pruning operations. All num-

mied fruits must be removed and burnt. Fruit spurs or laterals to which these were attached, and any other twigs showing even a trace of gumming should be removed also. Limbs which have died during the season with "dieback" must be cut well back into sound wood if possible, and the wound smoothed and protected.

### New Grading Regulations.

With regard to the new Apple and Pear Export Regulations for interstate trade, these have just been gazetted, but will not be enforced until June 1. Copies of the regulations containing full details may be had on application to the Department of Agriculture direct, or from the Orchard Inspectors stationed in the different districts.

### TASMANIAN APPLES IN U.K.

**Adverse Report on Early Shipments by Federal Member.**

**Apples in Canadian Case Showed Less Bruising than those in Dump Case.**

Some of the earliest of the Tasmanian Apples on the London market were inspected by Mr. C. E. W. James, M.H.R.; an adverse report was prepared and sent to the Premier (Mr. A. G. Ogilvie, K.C.). Mr. James stated the Apples ex "New Zealand Star" were immature and pitted, and with the exception of odd packs, compared unfavorably with fruit from other countries.

The bulk of the Ribstons and C.O.P. ex "Orontes" were unattractive, most lots showing bitter pit. The fruit in the dump cases showed considerably more bruising than that in the Canadian Standard case Apples from N.Z., S. Africa and U.S.A. sold on the same day were decidedly superior to the Tasmanian. The S. African Dunns and Golden Delicious were particularly fine.

The multitude of brands was also unfavorably mentioned. American Winesaps and Newtowns were available in long lines—1,500 to 2,000 cases. Some Tasmanian lots comprised five to fifteen cases. Opinion expressed at the London Fruit Exchange were that there had recently been great improvements in the Tasmanian packs, but further improvements were still needed. Commenting on the report, the Premier considered the industry was making a big mistake in taking up so much of the available tonnage in early boats.

A copy is to hand of the catalogue of fruit trees, rose plants, ornamental trees, etc., recently issued by L. P. Rosen & Son, of the Fernhill Nurseries, Pennant Hills-road, Carlingford, N.S.W. Fruit trees include Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Persimmons, Figs, Loquats, Quinces, Olives, Pineapples, Bananas, Passion Vines, Grape Vines, etc. Copies are obtainable on request.



## TASMANIAN APPLE CROPS

### Extraordinarily Difficult Season

Commenting on the 1936 Tasmanian Apple season, Mr. J. P. Piggott, general manager, Port Huon Fruitgrowers' Co-op. Association Ltd., Hobart, writes as follows:—

The Spring and early Summer of last year will go down in history as one that provided weather conditions that gave one of the largest and most continuous rainfalls that fruit districts had experienced in Tasmania for many many years, and everything looked as if there would be a prolific season—fairly heavy bloom and fair settings, but from the end of December right on till the middle of April very little rain or moisture has been experienced, and naturally this has had a bad effect on the Apple and Pear production.

One of our main late varieties, the Sturmer, has suffered very considerably in the sizing on account of the dry conditions, and a great quantity of fruit that the growers thought they would have will not pick to size, for the same reason. If these had been thinned and we had had a normal season, the balance left on the trees would have been too large. Thus growers had no control over these conditions and will suffer a heavy loss on account of the season's vagaries.

#### Pests Were Troublesome.

Growers have had one of the worst years they have experienced for at least 30 years, because, on account of the dry weather, pests have been more prevalent and on account of the early wet period, black spot has also been very prevalent. Though the growers sprayed repeatedly to prevent their crop from being destroyed, they were, in a lot of instances, unsuccessful.

The codlin moth was more troublesome on account of the dry weather and having an extra brood, but the worst pest is a new one—a little green moth which has been showing itself for some considerable time, but this

year did an enormous amount of damage. Growers looked at their crop on the trees and thought they had a splendid one, but when they picked the fruit and examined it, in some cases more than 50 per cent. of the fruit had to be discarded on account of the marks of this green moth. Fortunately it did not operate in all districts, but in some districts it was very bad and destroyed a great quantity of fruit. The growers, therefore, have had to go to the expense of picking the fruit, carting it in, sorting and grading, that is double the expense of any ordinary season, only to find in many cases, that they have only had half of their genuine estimate. It will therefore be seen that whatever prices may be obtained on the short supply to the overseas market, it will not make up for the heavy loss sustained by only having a limited number of cases to market.

Steps are being taken to eradicate this green moth next year. It is practically a question of spraying. It appears that the most suitable spray is a double quantity of arsenate from the pink to the calyx stage, sprayed well into the tips of the tree as well as other parts. Possibly before the spraying commences the Tas. Agricultural Dept. will give the growers a formula that will destroy this grub.

Tasmania, to carry her quota for overseas shipment, will have 43 steamers calling for fruit for overseas ports, and has, generally speaking, maintained her quotas in these boats, with the exception of one or two instances where great quantities of fruit had to be delivered in one week and growers were unable to complete on account of having so much extra labor forced upon them by the destruction of fruit as stated above.

The average overseas prices obtained up to the present (that is, the total fruit sold, all varieties, from one ship) would be from 8/- to 9/- per case, which would leave the grower a payable price for the quantity that he sent, but as stated above, those who only had half crops would show a severe financial loss on the season.

#### EMPIRE FRUIT CONFERENCE.

The Empire Fruit Conference opens in London at the end of June, and lasts for a week.

The delegate from the Australian Apple and Pear Export Council, Mr. Geoffrey W. Brown, left on the "Mongolia" to attend this conference.

Important matters of policy will be discussed. Mr. Brown will be back in time to attend the Annual Conference of the Australian Apple and Pear Export Council at Adelaide, October 26-31 next.

## N. S. W. CITRUS GROWERS' DEFENCE ASSOCIATION

A meeting of the Executive of the N.S.W. Citrus Growers' Defence Association was held at Gosford on May 23, 1936.

There were present Messrs. W. J. Black (Chairman), F. Bryant, V. S. Fagan, E. P. Fuller, G. O. Maher, R. Roughley, W. Schwebel, H. C. Yarnall, R. Hill, W. Smith, Gheri, B. Moore, and Bevan. Mr. H. Gordon Bennett in attendance.

#### Rebate on 1934 Exports.

On the motion of Messrs. Yarnall and Fuller it was decided to request the Department of Commerce that the rebate of 6d. per case on 1934 exports should be refunded to growers within 30 days of payment by the Government, and that agents should sign a declaration agreeing to do so.

#### Orchard Tax.

The Secretary read a letter received from the Acting Premier, on this subject. Several speakers confirmed the fact that Mr. F. Chaffey, when Minister for Agriculture, promised that growers would be granted a poll on the rescission of this tax, though they were unable to state the exact date of that promise.

Mr. Fuller stated that the Fruitgrowers' Federation represented a minority, not a majority, of the growers, and that a poll was needed to prove this to the Government.

It was decided to seek information from those who could assist in locating the statement made by Mr. Chaffey in order to bring same before the notice of the Government.

#### Market Rebuilding Scheme.

Mr. Smith stated that the attempt to transfer the Sydney Municipal Fruit and Vegetable Markets to State control was a danger that might develop into control over the marketing of fruit. This was a form of socialisation, which should be resisted, and the Premier and the Lord Mayor should be advised accordingly.

Mr. Hill stated the City Council had resumed 28 acres, and had removed existing buildings in order to rebuild the markets. The need for rebuilding was urgent, owing to the present congestion. The markets should not go out of the control of the City Council.

Mr. Moore said that the fact that the Fruitgrowers' Federation was with the N.S.W. Chamber of Fruit and Vegetable Industries in opposing the rebuilding came as a shock to growers. It was decided to send a strong letter to the Chamber, objecting to their request that the City Markets should not be rebuilt.

#### Fruit Growers' Federation Constitution.

Moved by Mr. Bryant, seconded by Mr. Roughley, that:—

"Remembering the previous attempt by the Fruitgrowers' Federation to foist on the fruitgrowers of N.S.W. a Fruit Marketing Bill, this meeting views with concern the re-organisation proposals submitted by the Federation to District Conferences."

"We object to the suggestion that the Federation be given a 'statutory constitution under a Fruitgrowers' Organisation Act,' as we fear that this will be used to constitute the Federation a Board to control the marketing of fruit. This meeting, representing the citrus growers of N.S.W., reaffirms its opposition to any such control of the industry."

After the Secretary had outlined the new constitution that the Federation was endeavouring to have adopted this subject was fully discussed.

Mr. Bryant, in moving the resolution, compared the wording of the proposed constitution and that of the Fruit Marketing Bill, which the Federation attempted to place before Parliament. Paragraph after paragraph of the Bill were included in the proposed constitution.

Mr. Roughley considered that every grower should do his utmost to stop it. Mr. Moore could not see how the small growers with orchards under 2 acres could support the constitution, seeing that these growers were deprived of any say in the management, while at the same time they were to be controlled by the Federation. Messrs. Hill, Schwebel and Fuller also supported the resolution, which was carried unanimously.

#### Fertiliser Subsidy.

Moved by Mr. Roughley, seconded by Mr. Hill:—

"That the Minister for Commerce be asked to extend the Fertiliser Subsidy to the coming year, and that a decision on this question be given prior to June 30 next, so that growers may plan ahead."

Carried unanimously.

#### Synthetic Fruit Drinks.

Mr. Bryant read a reply by the Department of Health to a request that the manufacture of synthetic fruit drinks should be prohibited in the interest of the fruitgrowers. This reply considered that such prohibition was not justified. The letter was received.

#### N.Z. Embargo on Citrus Fruits.

The Secretary reported the present position in regard to the attempt being made to have this embargo removed. It was decided to continue the pressure for the removal of this embargo.

#### STRAWBERRIES IN N.S.W.

Creswell Seedling and Fendelcino are the main varieties of Strawberries grown in the coastal areas of N.S.W., states the Chief Fruit Instructor, N.S.W. Department of Agriculture.

Ettersburg 89 has proved most suitable for the Tableland and inland districts of this State.

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## FRUIT BARROWS.

The threat of the N.S.W. Government to enforce the removal of fruit barrows from George-street, Sydney,

between Hunter and Market streets, resulted in a deputation of housewives, fruitgrowers and agents protesting to the Minister for Transport against

such action. It was pointed out by the Fruitgrowers' Federation of N.S.W. that eight barrowmen reported an annual turnover in the vicinity of 100,000 cases of fruit consisting of ripe fruit that would otherwise be wasted. Also that the barrows were giving an appreciated service to the community by making good fruit easily accessible and cheap.

ed increased production from the areas at present planted but not yet bearing, the markets available for absorption, and the marketing position generally.

The proposed committee to consist of nine members of the Assembly, and to make visits of inspection throughout the country.

## The "HOME" Train

Work over for the day, man and maid, young and old are intent upon "getting home." All day they have been concerned with business, mostly someone else's business, for the majority of the homeward-bound travellers are salary or wage earners.

Have they—have you—found time for personal business?

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(Guaranteed by the Commonwealth Government.)

## ENQUIRY INTO FRUIT INDUSTRY.

Government Commission Proposed in N.S.W.

In the N.S.W. Legislative Assembly, Mr. A. U. Tonking (Orange) gave notice of his intention to move for a select committee to inquire into and report on the fruit industry, particularly with regard to the cost of marketing, the prices paid by the consumer as compared with the prices obtained by the producer, the expect-

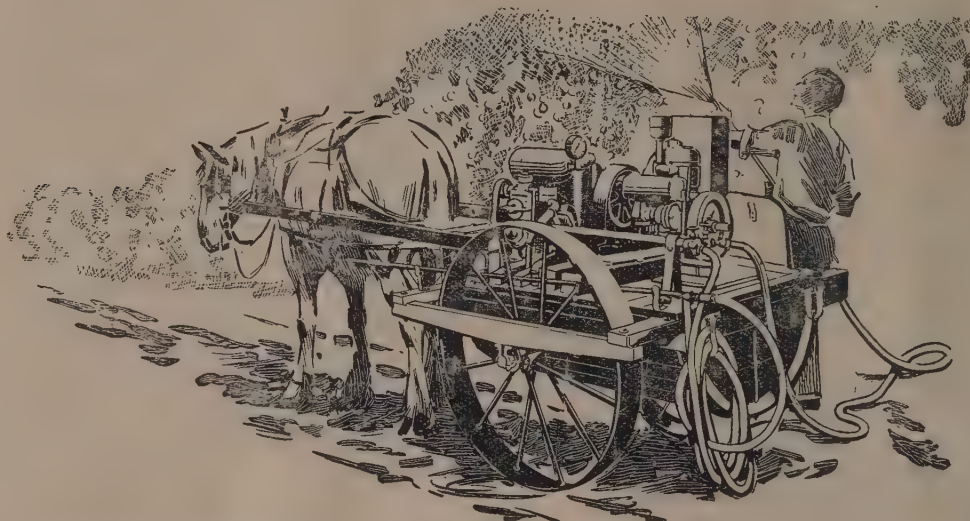
## THE BLUE RIBBON OF THE ATLANTIC.

During the last quarter of a century, there has developed one of the most remarkable contests the world has ever known. There are no rules. There is no prize, although a "Blue Riband"—a device so often used for the decoration of champions—is often referred to. By the tacit consent of the world's greatest maritime nations, the building of bigger and faster Atlantic liners has become a sort of international contest.

Britain, the leading maritime nation, began the contest when, in 1910, three years after the "Mauretania" was built, her recorded time for the trans-Atlantic trip broke the previous record. In 1922 the "Mauretania" broke her own record, with a time of 5 days, 5 hours, 50 minutes. This record was challenged in 1923 by the famous American ship, the "Leviathan," which reduced the time to 5 days, 1 hour, 10 minutes. The "Mauretania" responded to the challenge with 5 days, 3 hours, 45 minutes, further reducing the time in 1925 by 1 hour, 10 minutes, and again in 1929, this remarkable 20-year-old liner put forth her mightiest effort to forestall the just-launched "Bremen," of the North German Lloyd Line, and lowered the time to 4 days, 21 hours, 44 minutes. The brand new "Bremen" was able to break the veteran's record by only 4 hours, 2 minutes.

The "Europa" (North German Lloyd), with a time of 4 days, 16 hours, 48 minutes, and the "Normandie" (French Line), 4 days, 11 hours, 42 minutes, have set the "Queen Mary" a task that her designers confidently expect she will accomplish.

All the famous Atlantic liners mentioned in this article have been lubricated by Vacuum, the makers of Clearosol Mobiloil, and now the greatest masterpiece of her line, and of her time—the "Queen Mary"—is added to the list.



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NOTE: In the above illustration one of the sturdy mudguards has been removed, to show constructional details.

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# The Victorian Fruit Marketing Association

THE monthly meeting of the executive of the Victorian Fruit Marketing Association was held in the Board Room, Commercial Travellers' Association, Melbourne, on Friday, May 22, 1936, at 11 a.m.

In the absence of the President (abroad), the chair was taken by Mr. A. S. Harrison. There were also present Mr. W. H. Carne, G. Douglas, K. Eagle, J. B. Mills, C. H. Jost, F. Cave, H. M. McLean, J. W. Bailey, S. Brown, W. A. Thiele, W. Young, J. J. Tully, F. Moore, H. G. Sprague, C. J. Parnham, F. R. Mellor, W. P. Hutchinson, J. M. Ward (Superintendent of Horticulture), and the Secretary, R. E. Boardman. Grower members also in attendance included Messrs. C. P. Nobelius, Ray Bailey, and F. Gaash.

## Death of Mr. S. J. Perry.

The Chairman stated that the fruit industry had recently suffered a severe loss in the death of Mr. S. J. Perry—one who was widely esteemed. All present stood in silence in respect to his memory.

## Federal Grant.

In response to the Association's letter requesting that the £100,000 grant be made fully available to export growers on a per case basis instead of there being a reduction of £20,000 for research, replies were received from Hon. T. Paterson, Hon. H. E. V. Thorby (Acting Minister for Commerce), Messrs. E. J. Hogan, M.L.A., (Minister for Agric., Victoria), E. F. Harrison, M.H.R., and J. V. Fairbairn, M.H.R. Mr. Fairbairn in his letter stated he would protest in Parliament against the original grant being whittled down.

The Harecourt Branch, R.S.S.I.L.A., wrote supporting the action of the V.F.M.A., and seeking for the full distribution of the £100,000 without deduction for research.

The Tas. State Fruit Board and the W.A. Fruitgrowers' Association wrote in similar terms.

The South Australian Fruit Marketing Association wrote stating they approved of the grant for research, but supported the V.F.M.A. in its request that matters of policy be referred to representative associations.

Mr. Mills asked if the States were spending their research grant separately or was the C.S.I.R. acting as a co-ordinating body?

Mr. Ward replied that the C.S.I.R. had convened the original conference of State Departments of Agriculture and the Commerce Department when the States submitted their detailed programmes for the utilisation of the grant, and the money would be used by the several States accordingly. The Victorian grant was £4,650, of which £750 would be utilised in an intensive study of codlin moth in Pears, and the balance for investigations into other codlin moth problems, black spot investigations, manurial tests, etc. Two new science graduates had been appointed.

The various States, continued Mr. Ward, were sending in their reports to the C.S.I.R., and the money was being made available in progress payments in accordance with the work accomplished. With regard to the codlin moth in particular, a special committee had been set up, represent-

ing all the States (except W.A., which has no codlin moth), with Dr. Nicholson, of the C.S.I.R., as chairman. All the research work, therefore, in this connection, was being co-ordinated.

Mr. W. A. Thiele urged that where growers suffered loss through Departmental research work on their orchards, compensation for such loss be paid to the growers.

Mr. Moore said that some little time ago, a deputation representative of the Victorian fruit industry had proved to Mr. Hogan, Minister for Agriculture, the need for a grant of £5,000 per annum for five years to investigate pressing orchard problems—including those already mentioned by Mr. Ward. He submitted that the Government had responsibilities in this connection, and that the money for such research work should not have been extracted from export growers. The present grant should be supplemented by the Victorian Government to fulfil the programme outlined by the deputation referred to.

Mr. S. Brown spoke of the seriousness of orchard problems; he considered, however, that growers had a certain responsibility in assisting on their properties with investigation work.

Mr. Ward stated that fruit required by the Department for observation and experiment was purchased from the growers at market rates. Compensation was not paid to growers on whose properties investigations were being conducted, as the Department supplied all spraying requirements free of charge. The Department was endeavouring to establish research committees in each district. The Federal Research Grant, however, was for one year only.

Mr. Young supported the proposal for compensation to be paid to growers, otherwise those growers whose properties were used for research work inevitably suffered considerable loss. The outstanding need was for experimental orchards—one in the north and one in the south, where research work could be consistently carried through. He moved:—

That with regard to orchard properties on which investigational work is conducted, this Association affirms the principle of compensation to the grower being recognised as responsibility of the research funds, State or Federal.

Mr. Thiele seconded. Carried.

Mr. Tully advocated the appointment of a small committee from the V.F.M.A. to work in co-operation with the Department of Agriculture in relation to the distribution of the present Federal Grant.

Mr. Bailey spoke in terms of appreciation of the Department of Agriculture, with their manurial tests, and of their value to growers.

Mr. Sprague urged that not only could the proposed committee co-operate with the Department with regard to the present grant, but could seek in every way to have the research work increased. More money was needed for this work.

Mr. Tully moved:—

That with regard to orchard research work, a committee of three be appointed from this Association, and that a strong recommendation be made

to the Government that such committee should work with the Department of Agriculture.

Mr. Thiele seconded.

Mr. Moore submitted that as other associations were actively associated with research work, the appointment of a committee be deferred to give such associations an opportunity of nominating members of the committee. He moved as an amendment that the appointment of the committee be deferred until a reply be received from the Department of Agriculture.

The amendment was lost, and Mr. Tully's motion was carried.

Mr. Tully nominated Messrs. Moore, Hutchinson and Bailey. He proposed that this research committee should consider ways and means for increasing the grant for more research work and for experimental orchards.

On the motion of Messrs. Moore and Bailey an amendment was carried that the appointment of the committee be deferred.

## Codlin Moth in Pears.

In response to a letter from the V.F.M.A., Mr. H. A. Mullett, Director of Agriculture, wrote, stating £750 had been allotted from the Commonwealth Research Grant for research into codlin moth in Pears. The research period would cover two years, and would commence on May 1, 1936. Letter received.

## Sale of Fruit by Count.

Following the approval of the Association for the sale of Apples and Pears by count instead of by weight, the Department of Agriculture wrote proposing to have these provisions enforced, and asked if a similar procedure was desired for Peaches, which would involve the marking of the weight or number on the case.

The Secretary reported having obtained the views of the Northern Victoria Fruitgrowers' Association and the Southern Fruitgrowers' Association: approving the sale of Peaches retail, by weight, and the marking of the number of fruit, not the weight, on the cases. This information had been passed on to the Department.

Mr. Ward stated that an amendment of the Act would be necessary. Correspondence received and action endorsed.

## Apple Publicity Campaign.

The Apple and Pear Export Council wrote, sending particulars of successful Apple publicity schemes in W.A. A bulky file in this connection was laid on the table. Correspondence received, and decided to thank the W.A. Apple Sales Board.

## Fruit Industry Sugar Concession Committee.

The Secretary reported that since last meeting a letter had been received from the Fruit Industry Sugar Concession Committee, stating that nominations for a person to represent growers of jam fruits would close on April 30, and asking if this Association desired to make a nomination. Two conditions were attached:—(1) the sending in of the total number of grower members of jam fruits, and (2) the total tonnage delivered by grower members to factories.

After conferring with local Associations and recognising the justice of Tasmania maintaining her present membership on the Sugar Concession Committee, it had been decided by the President not to send in a nomination, bearing in mind that where the interests of jam fruit growers needed attention the necessary information

could be furnished to present members of the Sugar Concession Committee. Correspondence received and action endorsed.

## Cases in Shooks.

The Apple and Pear Council wrote, enclosing copy of letter from Comptroller-General of Customs, stating that the request that timber in shooks intended for manufacture of export fruit cases be admitted free of duty (under security), and that the fruit growers be released from the security provision by the signing of a statutory declaration had received consideration, but it was regretted the request could not be granted. The letter concluded by stating that the granting of drawback of duty on timber re-exported in the form of cases the Department really accorded free admission of such timber. Letter received.

## Uneven Railway Truck Floors.

Mr. Ray Bailey displayed a casting which revealed serious unevenness in the floors of the railway trucks used for conveying fruit. The unevenness occurred alongside the four bearers in the trucks. Owing to the weight of the fruit when cases were stacked, it was inevitable that 28 cases out of every 500 in every truck must be ruined. This was over 5 per cent. The extra strawboard recommended in a recent report from England could not prevent this damage.

Mr. Mills congratulated Mr. Bailey and said he was sure the Railway Department would appreciate the demonstration as revealed by the actual casting of the truck floor. It was by means of the attention of observant growers that improvements were brought about.

It was decided to ask Mr. Harrison and Mr. Ray Bailey to interview the Railway Department on this matter.

## New Members.

Messrs. S. J. Perry and Co., and F. W. Vear Pty. Ltd. were accepted as shipper members on the motion of Messrs. Bailey and Thiele.

## "Extra Fancy," and "Fancy" Apples in England.

The Australian Apple and Pear Export Council wrote, enclosing a report from the Commerce Department, by Mr. W. M. Carne (Research Officer, C.S.I.R.), pointing out that there should be a distinct difference between "extra fancy" and "fancy" Apples, and that no Apples (except exceptional fruit), by early boats should be marked "extra fancy."

The meeting then closed.

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## Extra Fancy and Fancy Grades in Apples

Report by Mr. W. M. Carne, Research Officer, C.S.I.R.  
London, April 9, 1936.

Arising out of a request from Mr. Wickens for a comparison of lines of Western Australian Jonathans marked Extra Fancy and Fancy. I submit some comments on grading, which I suggest might be submitted for the consideration of the State Departments of Agriculture and the Apple and Pear Export Council.

No Jonathan Apples arriving ex "Otranto," "Barrabool" and "Moldavia," and coming from Queensland, New South Wales, Victoria, South Australia and Western Australia, could be regarded as Extra Fancy lines. Indeed it is doubtful whether any lines could have been packed from this fruit, which would be regarded here as Extra Fancy. Though the fruit has varied in maturity, being more advanced from Queensland and New South Wales, and showing some tendency to wilt from Queens-

land, South Australia and Western Australia, the general average of color has been very even.

It appears evident that it is generally undesirable, except for exceptional fruit, to attempt to pack Extra Fancy Jonathans for the early boats at least. Indeed no red Apples should be packed Extra Fancy, especially early in the season, unless the fruit is definitely superior and averaging say 80 per cent. solid red (not red brown) color. The reasons for this are as follows:—

1. Extra Fancy indicates a line superior in color, etc., and definitely distinguishable from Fancy lines of the same variety on the auction show floors, as is true for American Apples.
2. The Standard for Extra Fancy in British markets, when Jonathans start to arrive from Australia is set by American Winesaps, which average 95 to 100 per cent. color. On the arrival of Australian Jonathans, rather immature and averaging about 50 per cent. color, Winesaps rose 6d. per barrel.

3. The official requirement of 50 per cent. color for Extra Fancy Jonathans should not be regarded as a mean average of 50 per cent. as some growers, notably in Western Australia, appear to do, but as the minimum for each Apple. I would suggest that Extra Fancy average 80 per cent., and Fancy 50 per cent. or thereabouts. The color percentage should be calculated only on full solid red (not red-brown or streaky red).

With modifications the foregoing also appears true for Worcester Pearmain, King David, Duke of Clarence, Delicious and even Cox.

Less difficulty is likely with green and yellow varieties. Provided they are of good shape, color and freedom from blemishes and generally superior they should be branded Extra Fancy. This should not apply to early shipments of Cleopatra, Granny Smith and Reinette du Canada, owing to their liability to pitting.

Though Dunns, for instance, are showing a marked difference in price for Fancy and Extra Fancy from the

same grower, I am advised by the trade that no notice is being taken of the grading of Jonathan. I have found no difference between Extra Fancy and Fancy Jonathans from W. Australia, even though there is a definite difference between Fancy lines from the several States. The trade advise me that the separation of the grades into Extra Fancy and Fancy in Jonathans and other red varieties is of no value unless the difference is obvious to buyers. If superior Extra Fancy lines are sent they will receive a corresponding advance in price over Fancy.

(Sgd) W. M. CARNE.  
April 9.

## Organisation in New South Wales

The subject of organisation now looms largely on the horizon of the N.S.W. fruit industry. This subject is sure to be considered in detail at the forthcoming annual conference of the Fruitgrowers' Federation at Sydney, at the end of June.

Broadly speaking, there appear to be three schools of thought:

(1) That the Federation, having performed much valued work, has outlived its usefulness, and should be disbanded, and that no orchard tax should be collected.

(2) That the Federation is as capable as ever of effectively serving the industry and should be made a permanent body with a statutory constitution.

(3) That, observing the methods of organising the fruit industry in Australia as in other parts of the world, the several major sections should set up their own organisations to deal with their specific needs. The finance from the orchard tax to be devoted principally for these specific sections, uniting in a small executive as a "Federation" when matters of mutual policy have to be decided.

:: :: ::

In the meantime these questions are being debated, among many others at the district conferences of growers.

At Parramatta, the chairman, Mr. J. Heane (President of the Federation), stated that the suggested alterations to the constitution of the Federation were not concerned with marketing, but were designed to secure a statutory constitution for the Federation.

Resolutions were adopted favoring co-operative buying under the auspices of the Federation; favoring the calling of a conference of citrus growers associations to form a truly representative body, and thanking the Federation for its efforts to secure the lifting of the N.Z. citrus embargo.

At West Maitland, a resolution in favor of a fixed price of 5/- for a half-bushel of Peaches, alternatively a Government subsidy was defeated: it was decided to ask that fruit inspectors be empowered to prosecute those responsible for damage to fruit when being marketed. On the subject of hail insurance, Mr. Herrod (Secretary of the Federation) stated there was no effective hail insurance system for fruit in any part of the world.

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 Secretary: Cr. C. G. A. George, Hightt Road, Moorabbin, Vic.  
 ALSO OFFICIAL ORGAN OF THE KOONDROOK & BARHAM TOMATO GROWERS' ASSOCIATION.

## Tomatoes, Celery, Asparagus.

Possibilities for Export. New Varieties of Tomatoes.  
 South Australian Celery the Best in the World.

Report by S. Aust. Agent-General and Trade Commissioner.

**T**OMATOES, CELERY AND ASPARAGUS, and the possibilities of their export, are dealt with in a recent report by Mr. C. F. G. McCann, the S. Australian Agent-General and Trade Commissioner in London, the information having been sent to the "Fruit World and Market Grower" by Mr. G. A. W. Pope, General Manager of the S. Aust. Government Produce Dept. on May 19.

Mr. McCann writes as follows:—  
**Tomatoes.**

Some time ago I sent out to South Australia a type of Tomato seed that lends itself admirably for preserving, retaining to a great extent its natural form and not disintegrating into pulp as most varieties of Tomatoes do when subjected to the process of preservation in tins. My object in sending seed to South Australia was the fact that sanctions against Italy had definitely suspended shipments of preserved Tomatoes to this country, and as there is a good demand for this article in preserved condition in the north of England, I was anxious to give South Australian preserved fruit packers an opportunity of catering for this trade.

As far as fresh Tomatoes go, this market is supplied from home-grown, Continental, and Madeira, but just lately Argentine has become an exporter. Last week a trial consignment of 150 cases landed in good condition and made good prices. There is a scarcity of Tomatoes at this

time of year here because new season's supplies are not available so early. I realise that shipment in fresh condition is out of the question as far as Australian is concerned owing to length of voyage, but the only point of interest to our Tomato growers is the varieties shipped, viz., Market King, Cooper's First, Hillside Comet, Clarks Early, Livingstone Globe, and San Marzano. All these varieties are popular here and the Argentine Ministry of Agriculture especially imported the seeds of these varieties to enable them to participate in the English market.

### Tomatoes, Asparagus and Celery.

Argentine is now sending both Tomatoes and Asparagus here stowed under the hanging quarters of chilled beef.

I have often wondered if Celery could be successfully carried at chilled temperature and would suggest a trial of a small quantity from South Australia to ascertain the condition on arrival. Last voyage I made from Adelaide we had Celery taken on board from South Australia served up to within a few days of arrival, and I believe the experiment would be worth trying. South Australia produces the finest Celery grown anywhere in the world, and if it could be landed here in crisp condition I am sure there would be a good market for it.

## POTATO BOARD URGED.

Organized Marketing Desirable.

Speaking at a meeting of Potato growers at Dunnstown on May 13, the Minister for Agriculture (Mr. Hogan) advised growers to organise and demand the application of the Primary Products Act to the Potato industry, with the subsequent establishment of "a marketing board.

He described the existing marketing conditions as inefficient, inadequate and costly. A board would eliminate

speculating, and would ensure a better return to growers than they are at present receiving, yet without increasing the price to the consumer unduly.

Another feature was that if a board were established, the sale of Potatoes for by-products would increase. A petition is being signed by growers asking for the establishment of a board.

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## PRICE OF VEGETABLES.

Disparity Between Wholesale and Retail Prices.

The great disparity between the prices received by the grower of vegetables and the prices charged by the retailer was revealed in a report read at the May conference of the Vegetable Growers' Association in Sydney. The report showed that sometimes the retail price was 100 per cent. more than the price received by the growers of vegetables in N.S.W.

These examples were quoted:—

In March this year growers received 2/9 per dozen cabbages. In the shops the average price was 5/9.

The difference was made up as follows:—Growers' average net return, 2/9; growers' average marketing costs, 3d.; agents' average commission and freight, 1/2; retailers' expenses and profits, 1/7—sale price, 5/9.

A bushel of Peas returned an average of 8½d. to grower. The average retail price was 5/4. The growers' marketing costs were 1/8.

**Tomato, Fruit or Vegetable?**

The approximate production of market gardens in New South Wales last year was £500,000, said Mr. A. A. Watson (Director of Marketing).

The meeting discussed the affairs of vegetable growers, production, financial returns, and market expansion.

Again cropped up that old question—is a tomato a vegetable or a fruit?

Officially, it keeps company with fruit, but the Warringah Glasshouse Association asked the conference to pass a motion asking the Department of Agriculture to classify it as a vegetable.

To agree with certain marketing regulations, they want it defined in one direction or the other.

## AERATION OF SOIL.

Increases Potato Yield.

**E**XPERIMENTS at Ohio Experiment Station (U.S.A.), showed an increased yield, ranging from 15 cwt. to 30 cwt., in potato crops, when the seed was planted over perforated drain pipes placed 5-in. deep, thus showing that aeration of the soil is of great importance in Potato production. Air in the soil quickly heals the cut surface of Potato sets, and plays an important part in a strong development of sprouts.

Whilst the placing of drain pipes such as these would not be economically possible in vegetable production, it has indicated that the ploughing under of coarse, organic matter had a similar effect in aeration of the soil. This explains largely why Potato soils should not be compacted, and why soils which lose their organic matter are compacted quickly after rain. Poor germination is certain should rain fall on such soils shortly after planting.

Value of organic matter in the soil could be further stressed in regard to the advantages accruing from the better moisture-holding capacity, better results from fertilisers, less second growth, and better quality. Continual cropping to Potatoes and grain crops quickly depletes soil of organic matter.

Rotational cropping in conjunction with stock is the ideal basis for maintaining fertility for the Potato crop.

It is worthy of note that the six highest yields in the 1934 Crookwell (N.S.W.) Potato crop competition were produced on soils well supplied with organic matter. Three of the crops were on areas where oats had been previously grazed, two followed subterranean clover, which had been regularly grazed, and the other was on new land.



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 'Eace House,' 50-52 Victoria St., WELLINGTON, N.Z.

278 Post Office Place,  
 MELBOURNE, VIC.



## MARKET GROWER SECTION—(Ctd.)

## THE KATAHDIN POTATO.

## Receiving Notice in U.S.A.

Although a comparatively new variety, the Katahdin Potato is gradually replacing the popular Rural New Yorker in certain districts in Colorado, in which great quantities of Potatoes are grown. This variety was developed by the U.S. Department of Agriculture, and tested well before its adaptability was disclosed, and it was released to growers for further tests in 1934.

Last year yields of over 600 bushels to the acre were reported by four different growers on non-irrigated land. Curiously enough, the reports from irrigated districts have not been so favorable, and further tests are to be made. Katahdin is a white, shallow-eyed, oval Potato, and its vine is vigorous and of a dark green color.

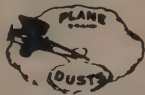
## WASHING POTATOES.

## Storage Life Not Lowered.

The 1935 annual report of the Washington (U.S.A.) Agricultural Experiment Station advises the result of a test that was made to determine the relative storage life of washed and unwashed Potatoes.

During the winter of 1934-35, ten sacks of Potatoes were washed by a machine built by the Agricultural Engineering Department. Pre-soaked, they were conveyed through jets of water to the sorting table to clean them of dirt. They were then bagged and with an equal number of unwashed Potatoes of the same grade, were stored at 40 degrees Fah. Every six weeks tests were made to check the breakdown.

After two seasons of study, the results showed that washed Potatoes keep as well as unwashed. The appearance and handling qualities were said to be greatly improved by the washing.



## "Plane" Brand Dusts

"Beauty" (Knapsack) Dusters  
"Superior" (Rotary) Dusters

ARE MANUFACTURED BY

**N. N. McLEAN Pty. Ltd.**  
395 Queen Street  
MELBOURNE

## PRODUCING NEW VARIETIES OF PEAS.

## A Slow and Careful Process.

For many years seed merchants have followed this method of improving their stocks, and it is the chief way of producing new varieties. From the thousands of plants grown in the fields and trial grounds, occasionally one may be found exhibiting a marked superiority in healthy constitution and crop. This plant is marked and the seed from the same is specially saved and proved for several years. When perfectly satisfied that the plant is successively fulfilling its earlier promise of outstanding merit, a new stock or re-selection is allowed to be worked up from same, and, after many more years of work, is ready for the market. Peas can only bear pods at each joint, so that the closer the joint the better; also, if types can be evolved which bear pods in pairs instead of singly, a very decided difference is made to the crop. It is along these lines that, after working for many years by the methods of selection, seed merchants have been able to increase the return per acre in numbers of cases from 10 to 20 per cent. Stock seed of Peas is carefully hand-picked before sowing and thoroughly "rogued" during growth at different stages of flowering and podding and all throwbacks carefully culled out.

## Our Juniors' Page

My Dear Smilers,

Just a few cheery words to my growing family. I was pleased to receive more letters, which are printed on this page. Perhaps some of you may like pen friends in the other States or New Zealand: if so, please write in a letter so that these happy contacts can be made.

I am very interested to know about your fruitgrowing districts, as

(I am pleased to have your letter Janet, dear, and to know of your doings on that fertile Murrumbidgee Irrigation Area. I liked your handwriting and feel sure you will be very successful in your school work. What is your pet subject? I was always fond of history, geography and English. I am sending you some stamps: if you happen to have these doubtless you could swap them with some



A Russell Island (Queensland) Fruit Packing Class. Some of the finished cases.  
(Block from "Queensland Agricultural Journal.")

well as about your school, pets and hobbies. Then I want more youngsters to write in to me, and to send me the date of his or her birthday, 'cause I've got a big fat book, and I put every birthday in and send you each a packet of seed as the birthdays arrive.

Cheerio, meet me again on this page next month. Much love,  
UNCLE JOE.

## INTERESTING LETTER FROM GRIFFITH, N.S.W.

Dear Uncle Joe,

I would like to become a "Smiler." My birthday is on 1st of June, and I am 13 years old.

I live in Griffith. It is in the Murrumbidgee Irrigation Area and is quite a large country town. We have 48 acres of land. The main fruits that we grow are table Grapes and Oranges. We also grow Peaches.

There is a large intermediate high school here. It was only built three years ago. I am in second year and I ride a bike three miles to school every day. Together with the primary pupils there are approximately 750 children. The Murrumbidgee river is 21 miles from Griffith.

I am very interested in stamp collecting. If you have any stamps to spare would you mind sending me some please. I have about 300 stamps and any that you send me will be appreciated very much.

I do not think a better name than "Smilers" could have been chosen for the members of "Our Junior Section."

I remain, Yours faithfully,  
Janet Holroyd.

Box 98B, Griffith, N.S.W.

## BEVAN MCKENZIE JOINS THE SMILERS CLUB.

Dear Uncle Joe,

I would like to become a member of your Junior Section. My birthday is on the 26th of June, and I am 12 years.

I live on a farm, one mile from the Tamar River. We have a little block of land and one cow. They have a good many orchards round us, and they send a good many cases of fruit to England.

The beach is about one mile from our place. Our chief port is Beauty Point, and we are nine miles away from the port. I remain, Your friend,

Bevan John McKenzie.

Rowella, W. Tamar, Tasmania.  
16/5/36.

[Delighted to welcome you as a member of our Smilers Club, Bevan. I was interested to read about your district. I've noted your birthday, and will send you a packet of seed when that happy day arrives. When next you write please tell me about your orchard—varieties, etc., and about your hobbies. Much love.—Uncle Joe.]

"I dreamed last night that I had invented a new type of breakfast food, and was sampling it when—"

"Yes, go on."

"I woke up and found a corner of the mattress gone."

Teacher: "Willie! Define the word puncture."

Willie: "A puncture is a little hole in a tyre, usually found a great distance from a garage."

## I Cut 95% Clean Cauliflowers!

WROTE A GROWER WHO USED

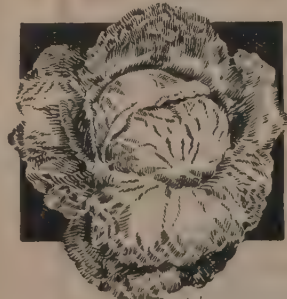
# DERRIDUST

The new safe Derris Insecticide

"DERRIDUST" is High Quality Derris Dust—it contains no less than  
**2% TUBA TOXIN**

Moreover it is finely milled and spreads well. Houghton & Byrne were the first to introduce a Derris Dust on the Australian market. In Official Tests "Derridust" has given better results than Lead Arsenate.

Growers! If you want more marketable hearts use "Derridust." It sweeps away the poison residue problem and is safe from planting day to cutting time. "Derridust" controls Cabbage Moth, Loopers, Diamond Back, Flea Beetles, Green Peach Aphids, etc., etc.



1/- per lb. in 100 lb. lots

50-lb. tins 55/-; 25-lb. tins 25/-; 5-lb. tins 10/-; 1-lb. tin 2/6; ½-lb. tin 1/6

A Queensland Grower writes:—

"We have been using 'Derridust' for the last six weeks for control of Cabbage pests. We marketed about 70% of our crop free of pest damage whilst the remainder were quite marketable and saleable.

We consider 'Derridust' to be the best insecticide we have ever used.

Order "DERRIDUST" from your dealer, or the Manufacturers:—

## HOUGHTON & BYRNE

SYDNEY: NEWCASTLE: MELBOURNE: BRISBANE:  
2 Bridge St. Cr. Crown & King Sts. 3rd fl. Empire Ar. T. & G. Bldg.

ADELAIDE: PERTH:  
12 Page St. W. G. Waidle, rep., 489 Murray St.

Illustrated Pamphlet on request.

## PATENTS

### GEORGE A. UREN

PATENT ATTORNEY  
HEATHY HOUSE 199 LITTLE COLLINS ST.  
MELBOURNE.



# AMONG THE RETAILERS

Uniform By-Laws and Regulations Advocated - Menace of Unregulated Roadside Stands  
List of Districts Affected by 7 o'clock Closing - Liability of Shopkeepers for Accidents in Shops  
Proposed Victoria Market Advisory Board.

The following information is to hand by courtesy of Mr. E. W. Thompson, Secretary Melbourne and Metropolitan Retail Fruiterers' Association.

## Uniform Laws and Regulations Required.

Unquestionably at the present time there exist great opportunities for organisation and united effort to endeavour to eliminate some of the very obnoxious and parochial laws and restrictions with which the community is confronted to-day, and although some of these irregularities may appear of little importance to some, each and every one has some unfair advantage over others, and often with serious consequences to all.

One that requires urgent attention is that of the by-laws relating to the passing of stationary trams in the various suburbs, when one requires almost a super-human knowledge of the boundaries of the various districts in which he may be driving at that particular time.

However, with the advent of the proposed traffic code and sensible administration, some improvement may be achieved.

Another is the playing of a game of tennis, golf, or some other healthy sport on Sundays is banned by some municipal bodies and encouraged by others.

Sunday picture shows are permitted in some suburbs and not in others. In one suburb a picture theatre situated in a street that divides one suburb from another is allowed to open by the civic fathers which control the side of the street where the theatre is situated, but on the other side of the street the opening of a theatre, or even holding a concert would be an unpardonable offence.

Selling of fruit and vegetables is permitted by all and sundry in the city proper on Sundays, and also in some of the districts outside the metropolitan area, and although the various municipal councils who are supposed to prevent this illegal trading have been approached on numerous occasions to carry out their duty (the duty that has been definitely allotted by Parliament to them), they have taken very little action to enforce their powers except in very few instances.

Recently, in view of the non-administration of the Police Offences Act, which definitely prohibits Sunday trading, there have been representations made to the State Government to place the administration of the law under the control of the Shops and Factories Department, instead of the municipalities, as at present, but so far no result has been achieved.

Everybody must admit that there is something lacking when kiosks and various kinds of stands are allowed to remain on public roads for indefinite periods, in some instances years, solely for the use of displaying goods which are being illegally sold on Sundays, and very often under most unhygienic conditions. Jams and other preserves are being sold at road-side under conditions which do not comply with the provisions of the Health Act, jam factories being under constant supervision of the authorities, but

what supervision is there over the manufacture of these "home-made" jams or the quality of the fruit from which they are made? Are all cod-lin moth infected Apples rejected? At times factory proprietors reject quantities of fruit unfit for use, and it is only reasonable to assume that persons who forward such fruit would not be averse to using it themselves when making "home-made" for sale.

Some municipal bodies have taken action to stop the sale of fish which had been bought at the fish market and taken to the seaside and sold as fresh fish, but in others it is still carried on.

There is strict supervision in regard to the sale of milk, but why should not the same apply to cream. Much discomfort was experienced recently by a family who removed from a well-known fashionable seaside suburb on a Saturday. It appears they had been in the habit of purchasing a large percentage of their requirements, even meat and groceries, on Sunday, but they found, to their astonishment, that such sales were prohibited on the Sabbath and on the following week-end they took such care that their previous discomfort was obviated.

These are only a few of the reasons which call immediately for the suggested alteration of the present antiquated legislation controlling this subject. Legislators—awake!

## Shops Act.

Many persons do not know exactly what the area under which the Act relating to 7 o'clock closing during the months of May to October inclusive apply, and for their information the districts are enumerated here. The municipal districts of Box Hill, Brighton, Brunswick, Camberwell, Caulfield, Coburg, Collingwood, Essendon, Fitzroy, Footscray, Hawthorn, Kew, Malvern, Melbourne, Prahran, Preston, Richmond South Melbourne, Northcote, Oakleigh, Port Melbourne, St. Kilda, Williamstown, and the Central and Southern ridings of the Shire of and the lands vested in the Melbourne Braybrook, the Shire of Heidelberg (except the Greensborough riding), and the lands vested in the Melbourne Harbour Trust Commissioners formed one district, called the Metropolitan District. That was the district concerned prior to October 31, 1928, but on and after that day the area was extended to include the Hampton and Sandringham wards of the City of Sandringham, the Borough of Ringwood, the Shires of Moorabbin and Blackburn and Mitcham, the Doncaster and Templestowe ridings of the Shire of Doncaster and Templestowe, the Broadmeadows and Campbellfield ridings of the Shire of Broadmeadows.

Originally the city proper was included, but during the year 1922 an Act was passed relating to the fruit shops in the City of Melbourne, which exempted all fruit shops in the area enclosed by Flinders-street, Spencer-street, Latrobe-street, Victoria-street, and Spring-street, from the provisions of the Early Closing Act for Fruit Shops.

## Registration of Shops.

Shopkeepers are reminded that the law requires that all fruit shops must

be registered with the Shops and Factories Department before the 1st of May in each year, and non-compliance with the Act renders them liable to heavy penalties.

## Shopkeepers' Liability to the Public.

A few retail fruiterers do not seem to realise their liability to their customers, or even to the general public. Recently a customer, on leaving a shop after making one or two purchases had the misfortune to slip and injure her leg in the doorway. This necessitated medical attention and expense for which the shopkeeper was liable.

Fruiterers who are in the habit of placing bags of Peas, Beans, or other vegetables about their doorways must see that they do not fall about the floor or doorstep, and endanger the safety of any person who enters his shop. The customer referred to had slipped on a pea shell that had evidently been opened, and the peas eaten and the shell thrown on the floor.

Peashells and pieces of French Beans are often to be seen on the footpaths within a yard or two of a fruiterer's door, and although they may have been obtained from his doorway, it would be very unjust to accuse him of want of care, or negligence in not keeping persons from taking them and dropping them on the footpath, but he is undoubtedly responsible if they are on his shop floor, and liable for any damage arising.

Shopkeepers owe a duty to every person who enters their shop, whether they be customer or not, and even to their own employees. On entering a shop recently the writer noticed an opening in the floor quite wide enough for a lady's heel to be caught in, and on advising the shopkeeper that he would be liable for any injury that might arise he was told that a complaint had been made to the owner, and that ended the tenant's liability. What an erroneous idea! The law holds a shopkeeper responsible for any damages arising, even to a person who enters to make an enquiry or any other honest reason. In fact, a burglar or a person in a similar capacity, who, of course is a trespasser on the premises with intent to do wilful damage or injury is the only

person to whom no duty is owed, and the shopkeeper exempted.

## Join Your Association.

This applies to growers, traders, manufacturers, etc:

Because there is strength in unity, and many worthy objects may be achieved which could not be achieved by individual effort.

Because it will be a step you will never regret.

Because the cost is generally small, and you will not miss it.

Because it will help you through many difficulties, and protect you in time of trouble.

Because it will show you are a sensible man, and perceive the great value of organisation.

Because it will keep you directly in touch with your fellow members whose motto should be: "Defence not Defiance."

Because those organisations do not support the wrong-doer, but safeguard the interests of its members.

Because it is the friend, adviser, and advocate for any benefit for its members.

Because it watches your interests and combats anything detrimental to your welfare.

## Proposed

## Victoria Market Advisory Council.

The first meeting of the proposed advisory Council consisting of representatives of the Wholesale Fruit Merchants of Victoria, the Melbourne and Metropolitan Retail Fruiterers, the Fruitgrowers, the Market Gardeners and the Victorian Berry-growers' Associations will be held in the Temperance Hall, Russell-street, on Thursday, June 11, at 7.45 p.m. As this Council will be representative of the principal parties doing business in the wholesale part of the market, it is to be hoped that its decisions and suggestions may be of some assistance for the general welfare of all parties transacting business there.

## SECURE YOUR

## FRUIT CASES

... from a reliable manufacturer. ... Write for further particulars and prices.

R. W. HALL & BLOOM PTY. LTD., Case Manufacturers, Whitehorse Rd., Mitcham, Vic.

# MELBOURNE ROYAL SHOW

17th to 26th September, 1936

Fruitgrowers: Exhibit Your Produce at this Show—the finest advertising medium in Victoria for the Fruit Industry.

LIBERAL PRIZE MONEY OFFERED FOR ALL VARIETIES OF FRUIT

Entries Close Saturday, 15th August.

WRITE FOR PRIZE LIST.

LOUIS MONOD, Secretary, R.A.S. of Victoria  
422 COLLINS STREET, MELBOURNE



# Export & Commercial News

## NEW SYDNEY MARKETS.

### Plan Criticised.

A deputation of fruit interests which waited on the Minister for Works and Local Government, declared that the City Council regarded the City Markets only as a rent-producing proposition, and denounced the Council's proposal to borrow £125,000 for the erection of new vegetable markets.

The leaders of the deputation were Messrs. A. U. Tonking, M.L.A., L. J. Jenkins (President N.S.W. Chamber of Fruit and Vegetable Industries), P. S. Macdermott, F. Chilton (City Fruit Markets), and L. T. Pearce (Fruit-growers' Federation).

Mr. Jenkins told the Minister that new vegetable markets would not be more than half full at peak periods and would result in higher rents and heavier charges. If the £125,000 was spent on the re-modelling of the present markets, the vacant land made available by the demolition of old buildings could be used for factory sites, and parking space so essential to the working needs of the markets.

One-fourth of the present markets were occupied by Chinese forestallers, who sold fruit and vegetables by the pound and used the markets for the purpose of retail shops.

Insufficient arrangements were allowed for the proper handling of goods by the agents, and proper ingress and egress had been blocked by the letting of space which was required for the handling of merchandise.

Present difficulties would be overcome by the following alternative schemes:—

Barber's shops, restaurants, and lavatories should be removed to a second floor or underground.

The fish market should be removed to a more suitable site at the water's edge.

The poultry markets should be transferred to the fish markets.

The markets should be placed under

the control of a trust that understood the need of proper marketing.

Mr. Tonking, M.L.A., who introduced the deputation, stated that the solution of the problem was the establishment by legislation of a marketing trust consisting of representatives of the producers, agents, distributors, consumers, and the Government, with power to borrow money.

At Albury, the Southern Districts Division of the Federation voted in favor of a Royal Commission to enquire into various phases of the fruit industry, with a view to improved marketing. Mr. H. J. Jefferies, of Young, who moved the resolution, said conditions at the Sydney markets were unhygienic. Mr. A. E. Herring (Batlow) in seconding, said the Government should take fruit control out of the hands of the City Council, and place it in charge of a Board with special knowledge of the industry.

## EXPORTS OF FRESH APPLES AND PEARS.

The Department of Commerce has issued a statement relating to the export of fresh Apples and Pears for the present season.

To the week ended May 2, shipments to all destinations totalled 4,086,315 cases of Apples and 554,398 cases of Pears. These figures represent an appreciable increase in relation to overseas exports for a similar period of the 1935 season, when 3,500,889 cases of Apples and 515,387 cases of Pears were despatched.

The following table shows the shipments from each of the States, and provides a comparison between the quantities exported in the 1936 season in comparison with the previous season. It will be noted that Tasmania, Victoria, South Australia and Queensland, show an increase in their Apple shipments, whilst all States,

with the exception of Tasmania, show an improvement in Pear shipments.

Exports of Fresh Apples and Pears. All Destinations—Figures in Cases.

Apples.		Pears.	
To	To	To	To
2/5/36.	4/5/35.	2/5/36.	4/5/35.
N.S.			
Wales	85,160	179,653	30,745
Vic.	553,380	469,589	356,498
Qld.	24,916	7,121	1,207
S.A.	434,769	257,207	26,137
W.A.	606,287	640,882	40,515
Tas.	2,381,803	1,946,437	99,296
	4,086,315	3,500,889	554,398

### A TYPE.

"M'm," the editor murmured. "Your handwriting's so indistinct I can hardly read these poems of yours. Why didn't you type them before bringing them to me?"

"Type 'em?" the would-be poet gasped. "D'you think I'd waste my time writing poetry if I could type?"



**F. Chilton,** Established 1894.  
Fruit Commission Agent,  
Licensed Under Farm Produce Agents' Act.  
Highest Market Prices, Prompt Returns, Reliable Advice.  
Registered Address for Telegrams and Cables—  
"Chiltons."  
City Fruit Markets, Sydney.

Telephone MA 3846. Established 1900.  
**W. MUSGROVE & SON**  
Licensed Farm Produce Agents.  
8 City Fruit Markets, Sydney.  
Our Motto—Quick Sales and Prompt Settlements.  
Forwarding Numbers:  
Tasmania, Victoria, S. Australia, No. 53.  
Queensland, Northern Rivers, No. 18.

**H. P. WOODWARD**  
Licensed Farm and Produce Agent,  
City Fruit Markets, Sydney.  
£1,000 Fidelity Bond. References, Bank of N.S.W.  
Telegraphic Address, "Woodward." Code, Bentley's.  
SHIPPING NO. 281.  
Phones: MA 2612 and X2317.

GROWERS!—Consign your Fruit to—  
**JAMES SLATER**  
21 CITY MARKETS, SYDNEY.  
Postal Address: Box 36, Haymarket P.O., Sydney.  
Established 1882.  
SHIPPING NO. 19. 88 VIC. & TAS.  
Stencils, Advice Notes, etc., on Application.

CONSIGN YOUR FRUIT TO  
**HOPKINS & LIPSCOMBE**  
Proprietor: STANLEY H. FOGSON.  
LICENSED FARM PRODUCE AGENT.  
MUNICIPAL MARKETS, SYDNEY.  
PROMPT RETURNS. SHIPPING NOS.—  
58 Vic. and Tas., 68 Q'land.  
Bankers: Bank of N.S.W., Haymarket, SYDNEY.

FRUITGROWERS!  
For Satisfactory Results, Send Your Fruit to  
**F. H. G. ROGERS**  
Fruit Selling Expert.  
Municipal Markets, Sydney.  
Shipping No. 83. Established 1900.

Growers Obtain Top Prices by Consigning to:—  
**H. J. GREENTREE**  
(Est. 1920)  
MUNICIPAL MARKETS, SYDNEY.  
Shipping Nos.—Tasmania 228, Q'land & Victoria 40.  
Phone: MA 1769.

SYDNEY...  
THE LEADING AUSTRALIAN MARKET  
FOR FRUIT  
The Commonwealth Trade Port for  
the Pacific and Eastern Trade

**Associated Growers' Selling Agency**  
Licensed Farm Produce Agents.  
CITY MUNICIPAL MARKETS.  
BRUCE R. SMITH, Proprietor.  
Reliable Service, Prompt Advice and Returns.  
Highest Buling Rates.  
Phone: MA 1823.

FOR SERVICE AND SATISFACTION  
Consign To  
**J. J. MASON,**  
City Markets, Sydney, N.S.W.  
Fruit Agent, Licensed Under Farm Produce Agents' Act, 1926. Bankers: Bank of N.S.W., Haymarket.  
Shipping Nos.—Vic., N.S.W., Queensland, 133; Tasmania, 185.  
Phone: MA2006.

## SUPPORT CO-OPERATION

By Consigning your  
FRUIT to the

**Producers' Distributing Society Ltd.**

(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"

and

All Orchard Requirements.

MELBOURNE SYDNEY  
NEWCASTLE DEVONPORT



# The Queen Victoria Market

## Story Of Its Development Large Extensions Planned

Before an interested audience of fruit growers at East Burwood, Victoria, on May 14, 1936, the Market Superintendent of the Melbourne City Council, Mr. G. B. Minns, gave an interesting and appreciated address on the subject of the Queen Victoria Market, concluding with a strong recommendation that the present "unholy" hours of marketing should be altered. Later marketing hours were earnestly advocated, in keeping with present-day developments of transport and culture.

In opening, Mr. Minns traced the genesis of marketing in Victoria from 1839, when the Government was vested in the mother colony of New South Wales. In 1841 marketing was conducted at the present site of the Western Market; this was operated two days per week—Wednesdays and Saturdays. On November 4, 1846, the site was granted to the Council by the Crown, and the grant stated it was given to the inhabitants of Melbourne for the purpose of a general market; and all subsequent grants of land, at the sites of the Eastern and Queen Victoria Markets, have been on the same terms.

Owing to the expansion of settlement north and east, it was decided to organise a new market, and in 1847 the present site of the Eastern Market was selected. It was found that two markets were not required, and when the Western Market buildings were burned down in 1853 the growers transferred to the Eastern Market which then developed into the main general market.

In July, 1856, the foundation stone for new buildings was laid at the Western Market; after the building was erected the stores were occupied by wholesale hay and corn merchants and importers of fruit from other colonies; the business gradually developed into the wholesale selling of fruit by merchants and agents, and this procedure held until the merchants were transferred to the Queen Victoria Market in November, 1930.

In 1877 the City Council determined to demolish the buildings that were standing at the Eastern Market and to erect the building which now occupies the site.

To provide accommodation for the growers who had been displaced, a market was commenced on the site of the Queen Victoria Market, and it was opened in March, 1878. During the 58 years of its existence, this institution has continued to expand, until it is now one of the greatest trading organisations in Victoria, if not in Australia.

The present Queen Victoria Market stands on an area of 16 acres, and accommodates growers, merchants, agents, dealers and retailers of fruit, but is also encroached upon by grocers, tobacconists, clothing merchants, and represents, on sale days, an Australian edition of the "Olde Curiosity Shop."

Mr. Minns was appointed superintendent in 1924, since when the accommodation has been increased by 2 sheds, with 232 stands. Two new sheds for growers of fruit and vegetables, with 176 stands, are now in course of erection, and will be ready for occupation by next October. This will give a total accommodation of 976 stands, with a frontage totalling

1½ miles. In the 12 years of Mr. Minns' superintendency, the cost of extensions has been £160,000, and it is proposed to remodel the meat, fish and rabbit sections at a further cost of £25,000.

### Growers Represented.

Altogether some 800 growers use the stalls provided for direct selling to the public. 47 per cent. are held by market gardeners, 45 per cent. by orchardists, and 8 per cent. by florists of the stalls allotted for these services. Of nationalities represented, the Chinese, who in 1924 held 81 stands, now only hold 46 stands, and no new permanent holdings by these merchants are granted.

Mr. Minns' figures show that orchardists are not availing themselves of the privileges of the markets in the way that market gardeners are doing, and urges the former to take stands on the new days (Monday, Wednesday and Friday) in view of the possibility of Saturday being declared a half holiday for the retail fruit trade.

### Hours of Selling.

He also suggests that the hours of marketing be made later in the morning to improve the present hard conditions which he considers unnecessary, and should be discarded. He contends that the extremely early buying now experienced incurs unnecessary hardship upon growers who have to arrive at the market during the night, and that orderly marketing within prescribed hours would create a commendable improvement to everybody. Prices would become more uniform, and the time wasted by growers would be eliminated by quicker sales.

For eight years from 1916, returned soldier growers had first claim on stands, and other growers were unable to obtain stands, but this difficulty has been overcome, and now general growers are able to obtain stalls, when available.

### Motor Transport.

The development of motor transport is illustrated by the following study. In 1927 55 per cent. of growers used horse-drawn vehicles, but by 1935 the comparison showed that 89.4 per cent of vehicles were motor-driven, and only 10.6 were still horse-drawn. Growing out of this change in transportation is the wider radius represented in the location of market gardens and fruit orchards in distance from the city. It has also increased offerings from far-away country districts, and has tended to centralise the marketing of primary products in the capital and large country cities. The average number of motor vehicles parked around the markets during June, 1935, was 1379, per day, whilst in December of the same year the number had increased to 1720.

## AUSTRALIAN APPLE AND PEAR EXPORT COUNCIL.

Annual Conference, Adelaide, October 26-31, 1936.

The President of the Australian Apple and Pear Export Council (Mr. J. B. Mills) announces that after conferring with the constituent State Associations, the annual conference of the Council will meet at Adelaide from October 26 to 31 next.

The South Australian Fruit Marketing Association, which is in charge of local arrangements, requests early notification re hotel accommodation from those intending to be present, as, owing to Adelaide's Centenary celebration, hotel accommodation needs to be booked considerably in advance.

## SYDNEY VEGETABLE MARKETS.

### Growers' Criticism.

Allegations of stall-hawking and dummieing at the municipal markets were made at the conference of the Vegetable Growers' Association of N.S.W., and the State Government is to be asked to hold an inquiry into the future control of the markets.

The conference decided to send a deputation to the Minister for Works to press for new vegetable markets, and to ask that the future control of all the city markets be inquired into.

The following officers were elected:—

President, Mr. A. A. Watson; Vice-Presidents, Messrs. A. E. Tasker and J. T. Johnson; Council, Messrs. A. G. Henderson, A. E. Cordner, H. Swane, A. Ling, G. Jordan, L. Lupis; Secretary, Mr. N. A. Wagschall; Treasurer, Mr. R. A. Short.

## STRAWBERRIES IN S. AUSTRALIA.

Mr. A. G. Strickland, M.A.G.Sc., Chief Horticultural Instructor, Sth. Aust. Dept. of Agriculture, advises that the following are the chief Strawberry varieties grown in Sth. Aust. Gandy, Ettersburg 89, Rhode's Special, Hackett's Giant, and Melba.

## COLLOIDAL ARSENATE OF LEAD.

May 22, 1936.

To The Editor, "The Fruit World."

Sir,—In your May issue you published a letter from "G.D.", of Ringwood, dealing with the codlin moth problem, and more particularly with lead arsenate sprays.

In the course of his remarks your correspondent said, "And why should not arsenate be in a colloidal form?"

We are pleased that this question has been asked, and the answer is "It is, and we sell it." Doubtless by now "G.D." will have read our advertisement in the same issue, wherein we announced the new "Lunevale" colloidal lead arsenate, and while we are not seeking free advertising, we take this opportunity of mentioning the matter in your columns—and we are also grateful to "G.D." for his timely remarks on the subject.

"Lunevale" colloidal lead arsenate is similar to cream, and it pours out in much the same way. We claim that it gives much better suspension in water, and more efficient adhesion to the lead surface. It is used in the same proportion as powder.

We note that you invite growers to write regarding their practical experiences in dealing with the codlin moth problem. We consider this to be a very commendable attitude, and feel that the interests of fruit growers generally would be furthered if major problems were discussed more fully through the medium of your paper. We might mention also that we would be very pleased of an opportunity to have a chat on colloidal lead arsenate with "G.D." or anyone else who may be interested.

Yours faithfully,

D. G. WILLS (MELB.) PTY. LTD.

J. G. Wilson,

Merchandise Department.

Franklin-street, Melbourne.

"Willie," said his Mother, "I wish you would run across the street and see how old Mrs. Brown is this morning."

A few minutes later Willie returned and reported: "Mrs. Brown says it's none of your business how old she is."

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CASH PRICE £32/10/-, F.O.B., ADELAIDE.

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Do not run any Financial Risk with your Fruit  
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## HEDLEY GEEVES PTY. LIMITED

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(Hedley Gees, Managing Director)

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#### SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.  
Harcourt Fruit Supply Co. Ltd.  
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.  
New South Wales: Griffith Producers' Co-op. Co. Ltd.  
Batlow Packing House Co-op. Soc. Ltd.



## Market Notes and Prices

### VICTORIA.

#### Market Report for May.

Whether or not the buying public draws in the purse-strings to get ready for income tax payments in June, it remains that May and June are comparatively slack months in the wholesale fruit trade. The smaller buying, however, is not always an indication of small supplies, but spread evenly over the month appears to reflect small demands.

May opened up quietly, enquiries not over-strong on any lines. Citrus was slow in coming in, although prices were then fairly high. Towards the end of the month, however, supplies increased beyond requirements, Grapefruit being especially in excess of demand, and prices proportionately dropped. Lemons were slow, the smaller sizes being unsaleable. Valencias finished during the month. It is reported that the quality of the Oranges being offered is better this year than at this time last year, and it is anticipated that, although the crop is light, prices will be good.

Very few Apples are being handled on the wholesale markets, though growers in open stalls in the Victoria market are selling good quantities at fair prices.

Fair supplies of Celery continued throughout the month, S.A. bringing the best prices. Supplies were light in the first week, but increased later, and the demand was sustained.

Peas kept their earlier price, and supplies dropped off towards the latter end of the month. Beans averaged 3d. to 4½d. for locals and 4d. to 7d. for Interstate, though supplies were not heavy.

Pineapples were very light right through. A fair demand was reported, and prices remained satisfactory. Bananas were scarce in the beginning, steadily increasing, but not over-supplied. Prices firmed towards the last week.

Given reasonably settled weather, June should be a better month. Spending will improve, and the periodical slack period should break up.

Melbourne (3/6/36).—Prices quoted by the Wholesale Fruit Merchants' Association yesterday were as follows:—Per Case: Apples, eating, 4/- to 6/6; cooking, 3/- to 5/-. Bananas, double case, green, best, 14/- to 19/-.

## RIDLEY & HOULDING

### Covent Garden Market, LONDON

Specialists in Australian Fruit.  
Solicit consignments of Apples, Pears, Etc.

Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

#### REPRESENTATIVES—

International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; Pitts & Lehman, 129 Pitt St., Sydney, N.S.W.; and A. J. Walshe & Co., Hobart, Tasmania.

Custard Apples, 5/- to 7/- half case. Celery, S.A., 6/- to 8/- (choice higher). Grapes, 5/- to 12/-; Ohanez, 7/- to 9/- (choice higher). Grapefruit, 5/- to 8/- (few higher). Lemons, 4/- to 8/-; Mandarins, 8/- to 11/- (few higher). Navel Oranges, 6/- to 11/- (selected higher). Passion Fruit, 9/- to 16/-. Pears, 4/- to 7/-.

Pineapples, 10/- to 17/-. Tomatoes, 6/- to 11/-.

The Melbourne market manager of the Federal Citrus Council of Australia reports that the citrus market is dull. Sales yesterday were as follows:—Washington Navel Oranges, average standard grade, 6/- to 9/-; a few, 10/-; selected standards, to

11/-; specially selected, to 12/-, a few 13/-; Thompson's lower. Grapefruit, Marsh Seedless, selected, 54-60, to 8/-; 45, 68-75, to 7/-; 96-112, 5/-; a few, 6/-. Lemons, average standards, to 5/- and 6/-; best counts (180-225), 300 up, from 3/-; a few specially selected, to 8/-. Mandarins, best Vic. and S.A. varieties, to 12/-; a few, 13/-.



Cable Address: DAVIS, MELBOURNE.

Code: "ABC," 4th and 5th Editions.

Box, G.P.O. 148B.

### J. DAVIS PTY. LTD., Fruit Merchants

8 WHOLESALE FRUIT MARKET

Consignments solicited.  
Telephone, F 3232.

One Trial-Invited.

Best Prices obtained.

Prompt Advice and Payment.

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Selected Agents for all Growers' Organisations Throughout the Commonwealth.  
Wholesale Fruit Merchants — Licensed Commission Agents — Importers and Exporters.  
No. 12 WHOLESALE FRUIT MARKET, MELBOURNE.

Having carried on a successful business for over half a century, our name stands high in the Wholesale Fruit Trade of Australia. Our spacious premises at Melbourne Wholesale Fruit Market are admirably adapted for the conduct of our large business, and growers are assured that our best efforts are always at their disposal.

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REGULAR SUPPLIES OF  
GOOD FRUIT, WELL PACKED  
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FRUIT AND PRODUCE MERCHANTS

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Telegraphic Address: GOOD PRICES ASSURED

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Cheques Sent Promptly.

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Growers Will Receive Top Market

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Pea and Bean Stands,

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## NEW SOUTH WALES.

Sydney (26/5/36).—The market representative of the Fruitgrowers' Federation of N.S.W. reports as follows:—Apples: Aromatic, 5/- to 7/-; Buncombe, 8/- to 10/-; Cleo, 5/- to 8/-; Crofton, 5/- to 8/-; Del., 8/6 to 13/-; Demo., 6/- to 8/6; French Crab, 4/6 to 8/-; Geeveston Fanny, 6/- to 9/-; G. Smith, 7/- to 12/-; Jon., 6/- to 11/-; L. Pippin, 4/- to 8/-; R. Beauty, 6/- to 10/-; Scarlet Pearmain, 5/6 to 8/-; Sturmer Pippin, 4/6 to 7/-; Tasman's Pride, 6/- to 8/-; Winesap, 6/- to 10/-. Pears: B. Bosc., 6/- to 7/-; Broome Park, 6/- to 8/-; Glou Morceau, 6/6 to 8/-; Jos., 7/6 to 11/-; Packham's T., 8/- to 11/-; W. Cole, 8/6 to 12/-; W. Nelis, 8/- to 10/-. Approximately 33,000 cases of Apples, including a small quantity of Pears, arrived from Tasmania this week. Included amongst the arrivals was a large quantity of London Pippin and French Crab. Shed-stored Jonathan, in some instances, lacked appearance. Extremely quiet demand was experienced except for small Jonathan. Apples throughout the week experienced slower sale. Pears: Tasmanian arrivals were light, but Victoria is forwarding steadily, and a few Pears came from South Australia. Orange district Packham's were more plentiful, and affected the market prices, the fruit from later districts being withheld. Winter Cole from Victoria and Tasmania affected values of this line, and fruit from late N.S.W. districts was withheld.

Bananas (N.S.W. and Q'land.), 14/- to 20/- trop. case. Custard Apples, Q'ld., 4/- to 6/- half case. Citrus:

Grapefruit, N.S.W., 2/6 to 8/- bush. Lemons, N.S.W., colored, 2/- to 7/- bush.; few special inland, 8/- to 9/-. Oranges, navels, N.S.W., 4/- to 7/- bush.; Q'land., 12/- bush. White Siletta, 3/- to 5/-; Parramatta, 4/- to 5/-; Patterson River, 5/- to 6/-; Mandarins, Emperor, 5/- to 7/-; few 8/- bush.; Thorny, 3/- to 5/- half bushel; Beauty of Glen Retreat, 12/- to 16/- bush.

## Comments on the Citrus Position.

Grapefruit: Local supplies are much more plentiful, but extremely poor demand is experienced for this fruit. Inland supplies are not considerable, but the best quality fruit is not yet appearing. Lemons: Supplies from metropolitan and coastal districts are plentiful, and most fruit is now showing color. Choice quality comprises a very small proportion of arrivals, and the bulk of sales are in the vicinity of 4/- to 7/-. Discretion in the type of fruit forwarded is advisable, as wastage is commencing to appear. Oranges, Navels: Most arrivals are large, and difficulty is being experienced in clearing this at a satisfactory figure. The sweetness of fruit is well advanced. Inland supplies are light. Other Oranges: Because of their suitable size, other Oranges are in request. Mandarins: Imperial variety is practically finished, and the quantity of Emperor available is increasing each day. Values for Emperor are inclined to ease. Thorny variety has just appeared. Approximately 300 cases of Queensland Mandarins arrived, the color being well advanced.

Grapes, N.S.W., Cornichon, 5/- to 8/-; few higher per half case; Per-

simmons, 3/6 to 4/6 few 5/- half bush. Passion Fruit, N.S.W., 4/- to 6/-; spec., 10/-; inferior, from 2/6 half case. Pineapples, Q'land., Queen, 10/- to 16/- trop. case. Papaws, 10/- to 15/- trop. case. Strawberries, 5/- to 7/- tray. Tomatoes, N.S.W., 3/- to 6/-; spec., 7/- half case; Q'land., 3/6 to 6/-; repacked, 5/- to 7/-.

## WESTERN AUSTRALIA.

Perth (25/5/36): Apples, Jon. flats, 3/- to 5/-; dumps, 5/- to 11/-; Dunn's flats, 3/- to 4/-; dumps, 3/6 to 7/9; R. Beauty, dumps, 5/- to 8/-; Yates, flats, 3/- to 5/-; dumps, 5/- to 10/-; G. Smith, flats, 3/6 to 4/6; dumps, 4/- to 8/6; Cleo., flats, 3/- to 4/-; dumps, 3/- to 7/6; Del., dumps, 6/- to 9/6; Doherty, dumps, 6/- to 8/- Citrus, Oranges, Navels, flats, 2/6 to 5/6 (special to 7/6), dumps 3/6 to 9/-; Val., flats, 3/- to 5/-, dumps, 3/6 to 7/-; Lemons, 3/- to 7/9; other lines, Pears, Keiffer, flats, to 7/6; W. Nelis, to 6/-; Jos., to 7/-; other varieties, flats, 2/6 to 6/-; dumps, 4/- to 8/-; Grapes, colored, Wortley Hall, 6/- to 7/6; others, 4/- to 5/6; Passion Fruit, to 12/6; Tomatoes, 2/- to 16/6; Quinces, dumps, to 6/-; Bananas, to 28/6 crate, Pineapples, to 26/-.

## SOUTH AUSTRALIA.

Adelaide (27/5/36): Apples (eating), 4/- to 7/- case; do. (cooking), 3/- to 5/-; Bananas (Q'ld.), 22/-; Lemons, 6/-; Oranges (common), 4/-, do. (Mandarin), 6/- to 16/-, do. (navel), 9/-, do. (poorman), 5/-; Passion Fruit, 28/-; Pears (eating), 8/-, do. (cooking), 4/-, Persimmons, 8/-; Pineapples, 18/-; Quinces, 4/- case.

## QUEENSLAND.

Brisbane: Messrs. Clark and Jesser report, under date May 21, as follows:—During the early part of the month heavy supplies of Apples came to hand, and consequently prices dropped to a rather low level; but for the past week, with lighter supplies arriving, prices have improved considerably, and the market has now a much firmer tone.

The ruling prices at present are:—Apples, Jon., 2½ and 2½, 10/-; 2½, 8/-; 2½, 7/6; S.P.M., 8/- to 9/-; Aro., 7/- to 7/6; R.B., 7/- to 8/-; Stp., 8/-; G. Smith's, 11/-; F.C., 9/-. Pears, W.C., 13/- to 14/-; small sizes, 10/- to 12/-; Jos., 12/- to 13/-; W.N., 11/- to 12/-; B.B., 8/- to 9/-; P.T., 10/- to 11/-. The citrus trade is very dull, Choice Emperor Mandarins, 6/- to 7/-; small sizes, 4/- to 5/-. Oranges, 5/- to 6/-; Navels, 7/- to 8/-. Custard Apples, 4/- qrt. case. Pineapples, 7/6 to 8/6 case. Tomatoes, choice, 4/- to 5/-. There is a big percentage of Tomatoes of inferior grade on the market, selling 1/- to 1/6 case. Cabbage and most small vegetables are plentiful, choice Cabbage selling 2/- to 4/- doz. Carrots, 9d. to 1/- doz. bunches. Beetroot, 6d. to 9d. doz. bunches. Beans, 9/- to 10/- sugar bag. Peas, 10/- to 11/- sugar bag. Rhubarb, 1/- bunch. Pumpkins, 4/- cwt.

Brisbane (22/5/36): Messrs. Robsons Pty. Ltd. report as follows:—Apples: The Ngatora this week carried a total of 6,600 cases, which sold as follows—Jon., to 10/-; Cleos, 9/-; Scarlets, 8/-; Aros., 7/6; Green Crabs, 10/-; Coles, 13/6; other Pears to 12/-.

Highest Prices.

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Sole Selling Agents in London for the South Australian Government for Fresh Fruits.

An All the Year Round Clientele for Apples, Pears, and Oranges. Sales by Private Treaty or Auction as desired.

N.S.W. Representatives.—Macdermott &amp; Sheedy, Municipal Fruit Markets, Sydney.

West Aust. Representative.—A. Hicks, 18 William Street, Perth.

Victorian Representatives.—Messrs Gollin &amp; Co. Pty. Ltd., 561 Bourke Street, Melbourne.

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Citrus Values: Local navel, to 12/-; Oranges to 8/-; Glen Mandarins, to 15/-; Scarlets and Emperors, to 11/-; Lemons, 15/-.

Custard Apples, 4/-; Papaws, 12/-; tropical case, and Passion Fruit, 11/-.

Bananas, 6's, 12/-; 7's, 13/-; and 8's, 14/-.

Tomatoes are still selling at low rates, choice green realising 4/-, and colored to 5/-.

Beans and Peas are maintaining firm values, choice quality North Coast Beans are selling to 13/-; and Peas to 12/- sugar bag.

Cabbage and other small vegetables are in plentiful supply, and are selling at low rates.

Potatoes, to 10/- cwt.; Onions and Swede Turnips, to 12/- cwt.; sweet Potatoes, Reds, 5/- cwt.; and Whites, 4/- cwt.

#### NEW ZEALAND.

Dunedin (22/5/36): Messrs. Reilly's Central Produce Mart Ltd. report as follows:—Consignments of Apples are very much lighter, and for good quality fruit there is a slightly better enquiry. Some nice lines of Del., Jon., and Sturmers are coming to hand. Smaller supplies of Coxes are still available.

There is a slightly better enquiry for Pears, first grade lines having a fair demand.

Out-door Tomatoes are now finished for the season, and local hothouse are much firmer in price. Ripe Bananas have a good enquiry.

Oranges are short of requirements, but there is a small shipment of Californians arriving during the week, and this will be followed by a shipment of Cal. and Raratongan Oranges ex the "Makura," due in Wellington on May 25. It is satisfactory to note that the embargo has been lifted, so as to enable South Australian Oranges to come on the market from June onwards.

The "Waikouaiti" brought a shipment of Queensland Pineapples, and this fruit met with a good enquiry.

Supplies of fresh vegetables are still ample for requirements. Potatoes, particularly King Edwards, are selling well.

Prices: Cal. Lemons, 50/-; Cal. Grapefruit, 35/-; Cal. Navel, 40/-; Ripe Bananas, 20/-; Pines, 18/- to 21/6; Apples, Coxes Orange, 8/- to 10/6, Jonathans 4/- to 6/-; Del. 4/- to 7/-; Tasma, 5/- to 6/-; Winesaps, 5/- to 6/6; Lord Wolsely's, 5/- to 6/-; Cooking Apples, 4/- to 6/-; W. Cole, 4/- to 7/-; Nelis, 4/- to 7/-; Cooking Pears, 4/- to 5/-; Quinces, 4/- to 5/-.

Per Half Case: Pears, W. Cole, 2/- to 4/-; Nelis, 2/- to 4/-; Over-ripe and Wasty, 1/- to 1/6; Cooking Pears, 1/6 to 2/-; Passion Fruit, 9/- to 10/-; Cape Gooseberries, 6/6.

#### AUSTRALIAN FRUIT IN U.K.

London, May 16. Demand for Apples stronger. Tas.—Jon., 7/6 to 9/- case; Sturmer, 7/6 to 10/-; Cleo., 8/3 to 9/3; French Crab, 8/- to 9/3; Cox, 10/- to 13/-; Alf., 8/- to 9/9; Worcester, 8/- to 8/9. Vic.—Jon., 7/6 to 9/-; Dunns, 8/- to 9/3; Granny, 12/- to 14/3. Sth. Aust.—Cleo., 8/3 to 9/-; Romes, 8/6 to 9/6; Dunns, 8/- to 9/-.

W.A.—Cleo., 8/3 to 9/6; Jon., 8/9 to 9/3. N.S.W.—Granny, 10/- to 15/-.

Pears: Demand good; Tas.—Coles, 8/- to 10/6; Bosc., 8/6 to 11/3; Nelis, 9/6 to 12/-; Packhams, 9/- to 11/3; Comice, 12/- to 16/-.

Vic.—Bosc., 10/- to 11/6; Packhams, 9/- to 12/6. Coles, 8/- to 10/-.

South Aust.—Bosc., 9/3 to 9/9; Jos., 11/- to 12/3.

New Zealand.—Jon., 8/- to 10/-; Del., 8/6 to 10/3; Dunns, 8/- to 10/-.

Pears, Nelis, 9/- to 10/9; Coles, 9/6 to 9/9.

Liverpool, May 16. Tas.—Cleo., 7/9 to 9/-; Cox, 8/- to 11/3; Jon., 7/9 to 8/9; Dunns, 8/9 to 9/3; Alf., 8/3 to 9/6. Vic.—Jon., 8/3 to 9/-; London, 6/-.

W.A.—Cleo., 9/- to 10/-; Jon., 8/- to 10/3; Dunns, 9/- to 9/6. N.S.W.—London, 8/- to 8/6.

Major H. Dakin, representative in Australia of Geo. Monro Ltd., London and Manchester, advises under date May 6 having received cable from his principals as follows:—

Orion and Bendigo.—Apples generally good, some bitter pit in Coxes, trade fair. Ribstone, Fr. Crab, King Pippin, 8/- to 9/-; Jon., 9/- to 10/-; Geveston Fanny, Duke of Clarence, 8/6 to 9/-; Cox, 12/- to 17/-.

## FIRMS IN THE FRUIT TRADE

F. Cave and Co. Pty. Ltd.

(No. 10 of Series.)

Fred Cave arrived in Australia from England in 1913, and secured his first and only position in this country, other than his present one, as managing director of his company, with the Coastal Farmers' Co-operative Society Limited, now the Producers' Co-operative Distributing Society.

He joined the firm as a clerk, but rose in the company until he became one of the firm's accountants in the Sydney office, subsequently he was transferred to take charge of the firm's Melbourne branch in 1920, retaining that position until early in 1922, when he established his present business.

Having made a success of his personal contacts with country growers, and largely upon their advice, he decided to branch out for himself, and it can be truthfully said that he has never looked back, and that in the 14 years that have marked the activities of his company in Melbourne, it has grown into one of the largest Apple and Pear export businesses in the State.

#### Export Market.

During his earlier business experience in England, Mr. Cave included the handling of fresh fruit from almost every exporting country in his general work in grocery lines, and he knows that quality counts with English buyers, and is satisfied that if Australia is to compete with other fruit producing countries, she must send only high quality fruit, properly packed and true to name.

The company has the honor of representing, in Victoria, the highly reputable firm of Messrs. J. O. Sims Ltd., Boro' Market, London, recognised as one of the leading fruit distributing houses in Great Britain.

#### Local Market.

In local fruit circles, Mr. Cave is equally well known by his frequent personal visits to growers in fruit areas, as well as for the sole management of his company's service in the wholesale market to both growers

and retailers, in which he commands the highest respect. His central store and offices are situated in No. Wholesale Fruit Markets, Melbourne.



#### Increasing Home Consumption.

For many years, Mr. Cave has been a strong advocate for the increase of the consumption of fruit in Australia, and claims that to effect such increase growers must realise the importance of catering for this local trade in an efficient and satisfactory manner as they do for the export trade.

The marketing of immature and over-stored fruit, he suggests, is one of the causes for the comparatively poor response shown by the public and the consequent smaller returns to growers. Another point he stresses is that we must keep from the market mixed grades, which at present militate against a generous public response.

#### Fruit By-Products.

Mr. Cave has always supported the elimination from the market of inferior quality fruit, and does his best to assist the grower in finding a suitable outlet for fruit that may not be quite up to standard for display, but can be processed into by-products.

With this end in view, he has established Cave's Pure Fruits Drink Pty. Ltd., which, while assisting the grower, is at the same time providing health-giving drinks, a service long overdue to the public.

A proof of this lies in the fact that the original factory premises at 252 Rosslyn-street, West Melbourne became too small, and the company had to remove to more commodious premises at 11-13 Dynon road, South Kensington, where a two storied building, containing 8,000 square feet of floors, and equipped for the up-to-date treatment of fresh fruit for the extraction of fruit juices and other by-products is now operating.

Mr. Cave was one of the pioneers in the Victoria Mark Fruit Company which was created to improve the standard of fruit marketed on the local and interstate markets. He is also on the Executive of the Victorian Fruit Marketing Association, the local link in the chain of operations of the Australian Apple and Pear Export Council, which statutory body is also interesting itself in the domestic marketing of fruit within the Commonwealth, with a view to improving quality and therefore definitely increasing home consumption.

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# The Home Circle

## CHILD WELFARE NOTES

By Olive M. Green, Sister-in-Charge, Baby Health Clinic, Launceston.

### Vitamins.

**I**F WE TOOK OUR FOOD in its natural state, or even if a large proportion of our daily diet consisted of fresh raw vegetables and fruit, we would have no need to concern ourselves with this question of vitamins. With the universal use of white sugar, white flour, highly refined, tinned and preserved foods, however, a knowledge of these important substances is essential to our well-being.

Almost everyone is familiar with the word "vitamin," but no one seems quite sure what vitamins are, or exactly how they work. We do know, though, that they are very necessary for the proper growth and development of the child, and the maintenance of good health in the community. Also, it has been scientifically ascertained that the lack of one or more vitamins in the daily diet causes certain deficiency diseases, which vary in kind and severity according to the kind and amount of vitamin deficiency.

Vitamins are organic substances, primarily produced in the presence of sunlight, unseen ever under microscopic analysis, which exist to the greatest degree in green vegetables, fresh fruit, grains, and in varying degrees in the food products of animals, who are themselves fed upon green leaves.

We must not confuse vitamins with mineral salts. Vitamins are destroyed by processes which leave the mineral salts unharmed—such processes as heating, ageing, drying, and the use of certain chemicals for preserving. These do not affect the mineral salts, which can be preserved in tinned or bottled fruits for years. Both mineral salts and vitamins are wholly or partially removed from the cereals by our modern methods of milling and preparation. We need both these food elements for the keeping of the body in a healthy condition.

### Baby's Food and Vitamins.

Mother's milk is the perfect food for baby, as it is made for him by nature, and contains all the necessary food components, mineral salts and vitamins necessary, particularly when the nursing mother herself has an adequate supply of fresh food.

For the artificially-fed baby, humanised milk is the best substitute for mother's milk. Because some of the vitamins are destroyed in the process of sterilising the milk to make it safer and more easily digested by baby, we must supply extra vitamins by the addition of cod-liver oil and a daily allowance of fresh fruit or vegetable juice. Orange, carrot, grape or tomato juices are the best, and should be given in warm, boiled water. Do not add boiling water or very hot water to the juices, as heat destroys the vitamin content.

For the toddler and older child, remember that the simple things are best. Generally speaking, the farther we get from the natural state in which the food grows, the less nourishment and vitamins we obtain from it. Ensure an ample daily allowance of

fresh fruit and green vegetables, wholemeal bread, and a fair amount of milk (approximately one pint daily). Cod-liver oil (either pure or in emulsion form) should be included in the daily diet from weaning onwards, particularly during the winter months. This food has very aptly been called our "bottled sunshine." If the money that is spent on sweets were spent on fruit for the children they would be much healthier, and many sicknesses and pains of later years would be avoided. Tomato, cress, celery lettuce, spinach, parsley, marmite and honey on wholemeal sandwiches for the toddler's tea contain more nourishment than and more vitamins than white bread and jam.—"Tasmanian Journal of Agriculture."

### CHEESE AND CARROT SALAD.

Take some cream cheese, moisten it slightly with cream, and form it into carrot-shaped cones. Dip each one in grated raw Carrot, and put a piece of Parsley at the thick end to represent the top. Cut up some Celery finely, place in the middle of a dish, arrange Watercress or Lettuce leaves round, place at intervals the cheese Carrots and serve with mayonnaise dressing.

### LEMON HONEY CAKE.

One half cup butter creamed with  $\frac{1}{2}$  cup sugar. Add  $\frac{1}{2}$  cup honey. Beat 1 egg and add to mixture. Stir well. Grate 1 lemon rind and add. Sift 3 times 2 cups flour,  $1\frac{1}{2}$  teaspoon baking powder,  $1\frac{1}{2}$  teaspoon cinnamon, dash salt. Add  $\frac{1}{4}$  cup milk, beat thoroughly. Bake in muffin tins or in a loaf pan. Grease pans well. Keeps well, and does not dry out.

### HOUSEHOLD HINTS.

One half vinegar and one half salad oil mixed together will take white spots off furniture.

To spread delicate garlic flavor evenly throughout roast, mash garlic finely with salt. The mixture sprinkles easily, and the salt carries the flavor to the whole roast.

Use the liquid in which a piece of ham or pork has been cooked for cooking macaroni, Spinach, or Rice, instead of water.

### POTATOES AS SOLE FOOD IN IRELAND 100 YEARS AGO.

It goes against present-day theories of nutrition that one food constituent alone is sufficient for the human body, but it is said that nearly one hundred years ago, about 4,500,000 people in Ireland lived upon Potatoes alone, the usual allowance for a laboring man being 14 lbs. a day. It was estimated that to feed this number who ate nothing else, and an approximately similar number who made Potatoes part of their diet, something like 804,000 acres of Potatoes were grown in Ireland with an approximate yield of eight long tons per acre, or a total of 12,617,500,000 lbs.

# Beekkeeping Notes

## BEES IN WINTER.

### How They Conserve Their Vitality.

**I**N the bee-farming districts where climatic conditions are on the cool side, colonies of bees will now be settled down to their semi-hibernating and real Winter state. The field activity will be limited to short flights by sections only of the field force during sunny days. It is best not to interfere with the colonies until Spring activity is again evident, says Mr. W. A. Goodacre, Senior Apiary Expert, in the N.S.W. Agricultural Gazette.

### Bees Economise During Winter.

Bees consider all aspects of economy to ensure that no more than absolutely necessary of their store of food will be used up, so that the colony will not be faced with starvation. They do not wait until economy is forced on them, but rather they are careful right from the beginning of the cold weather.

Already it will be found that the drones have been killed off, their services being no longer required, and it would need a good deal of food to keep these lazy fellows going. Brood rearing, too, has been reduced to a minimum or cut right out, for it is difficult to give proper attention to incubation of brood during Winter. In addition, a good deal of food would be used in feeding the larvae, and it would mean more work and wastage of energy, which is so vitally important in bee life.

### Conserving Their Vitality.

Bees in their restful Winter cluster are warm and comfortable; they consume only small quantities of food and conserve their energy to such an extent that they come through the Winter to Spring activity with practically undiminished vitality.

Young bees have specially developed glands for secretion of chyle food for bee larvae, and under active seasonal conditions these glands soon deteriorate, but during Winter with restful conditions there is little, if any, deterioration. As thousands of young larvae will need to be fed lavishly during Spring before the new season's force is raised, the conserving of the bees' vitality, and consequently the glands, is of much importance.

## Winter Honey Flows.

A Winter flow of honey may occur in a few of the warmer inland districts, and on the coast. As a Winter honey flow is somewhat abnormal, the extraction of honey at this period is a great deal more troublesome than we find it during seasonal times, particularly in the inland areas where honey is of a heavier body.

### Extracting a Winter Crop.

It is advisable to extract combs of honey as soon as possible after removing them from the hives. In the hives the bees keep the combs warm to some degree, but they cool down rather soon after being taken out, and when the honey becomes dense in the cells it is difficult to extract, and there is a risk of damaging valuable combs in the honey extractor.

Where a central extracting plant is operated and time is taken up in transporting combs of honey, it is very desirable to have a hot room available to warm them up again prior to uncapping and extracting them.

### Bees Upset by Winter Flow.

Colonies working on a Winter honey flow are usually temperamental and difficult to control. A gentle strain of bees when moved to a tea-tree flow near the seaside get quite disagreeable. It is advisable, therefore, to prevent the robbing tendency so that they will not become further annoyed. It will be helpful if the beekeeper is well prepared so as to get through with any hive manipulation as readily as possible. He should also keep any honey well covered.

### CARE OF STORED HONEY.

If honey is stored in a damp place, and not thoroughly sealed up, it will absorb moisture, and if excessive moisture is so taken up the honey is liable to ferment and deteriorate in value. Do not leave the lid off the containers, or leave honey exposed for any length of time during the late Autumn and Winter months. If kept in a dry place in a sound container, honey will keep good for years. It may granulate, but that is not a sign of deterioration, and in such cases it may easily be liquefied by immersion of the container in hot water.

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## BEEKEEPING—

(Continued from page 39.)

## IMPROVING THE FLAVOR.

## New Process Discovered.

A method of treating honey that is declared to give it a flavor resembling comb honey just taken from the hive has been developed by Dr. E. J. Dyce of Ontario (Canada) Agricultural College. This is done by heating the strained honey in such a manner that it does not ferment nor form large crystals, but on the other hand forms microscopically minute crystals which cause the flavor to change, says the "Western Canner and Packer," U.S.A.

As described by Professor E. J. Phillips, of Cornell University, the honey is heated to about 160 deg. F., at which temperature any yeast cells which may be present are destroyed. By using a vessel which transmits heat from the steam in the jacket slowly, the honey, which is extremely sensitive to heating, becomes thinned without discoloration or harm to the flavor. The process also calls for constant agitation of the honey during heating.

After reaching 160 deg., the honey is cooled as speedily as convenient, and when it has reached about 75 deg. there is then added to it pure honey which has undergone this process previously. The new honey, with the crystallised honey, is then stirred for about 15 minutes, the cooling continuing until the temperature has dropped to 70 deg. or even 65 deg. It is then thicker than before, but will still flow rather freely, and at this stage is put into the containers, after which the containers are placed in a constant room temperature of exactly 57 deg. After about two days the honey is firmly crystallised and ready for market, but if the temperature either rises or falls two or three degrees from 57, crystallisation is retarded.

## The Pig Pen

## MAIZE MEAL FOR PIGS.

## Compared With Barley.

A STARCH food that is only second to barley meal in importance in pig feeding is maize meal. Its protein is about the same and the starch equivalent is approximately ten points higher. On the other hand the amount of ash present is half that found in barley; potash and phosphoric acid make up most of the mineral matter (ash), whilst chlorine is absent. It is a food that is highly digestible as its fibre content is low, writes T. S. Wright in "Eggs" (Eng.).

Owing to its similarity to barley, maize meal frequently takes the place of the former, and should be fed lb. for lb., and since it is usually lower in price, provides a valuable means of effecting economies in all types of feeding. For the poultry-pigkeeper, maize meal is a feeding stuff of considerable importance since it is widely used among both classes of livestock. It would appear, however, that in

poultry feeding many examples of rations include unduly heavy proportions of maize meal, and it should, therefore, be emphasised here that the same liberal policy will not prove satisfactory in pig feeding.

For pigs, maize unfortunately possesses two decided disadvantages in that its proteins yield flesh of rather inferior quality, and also it has a large proportion of oil—4.5 per cent., compared with 1.5 in barley. This excess of oil curtails the use of the meal where the man with a reputation for good feeding aims at producing fat hogs that will give pork, bacon or hams of the first quality. Pigs fed on a fattening ration containing a heavy oil content will, after slaughter, be found to have developed a fat that is soft and oily in nature. Consequently, when the various processes of curing have been carried out, the final products will be poor in appearance and texture, probably possess a disagreeable flavor, and the fat color will be poor.

For modern requirements bacon fat must be dry, hard and white, and,

therefore, to attain this, rations should contain as little oil as possible.

From the point of view of fattening, any reduction in the oil content of a pig food is desirable, so that the danger of an excess of oil arising from the too liberal use of the flaked maize, is not so great as from the maize meal. Pigs do not relish "doughy" food, and though they require some bulk it must not be excessive. Maize in the flaked form included in a ration also containing a foodstuff like bran may tend to make the entire feed bulky, so that care must be taken to see that this possibility does not materialise.

## FEEDING OF PIGS.

## Need for Better Methods.

Much better results would be obtained in pig raising if closer attention were given to the important matter of feeding, remarks a N.S.W. Agricultural Department pamphlet. The many points which make for success-

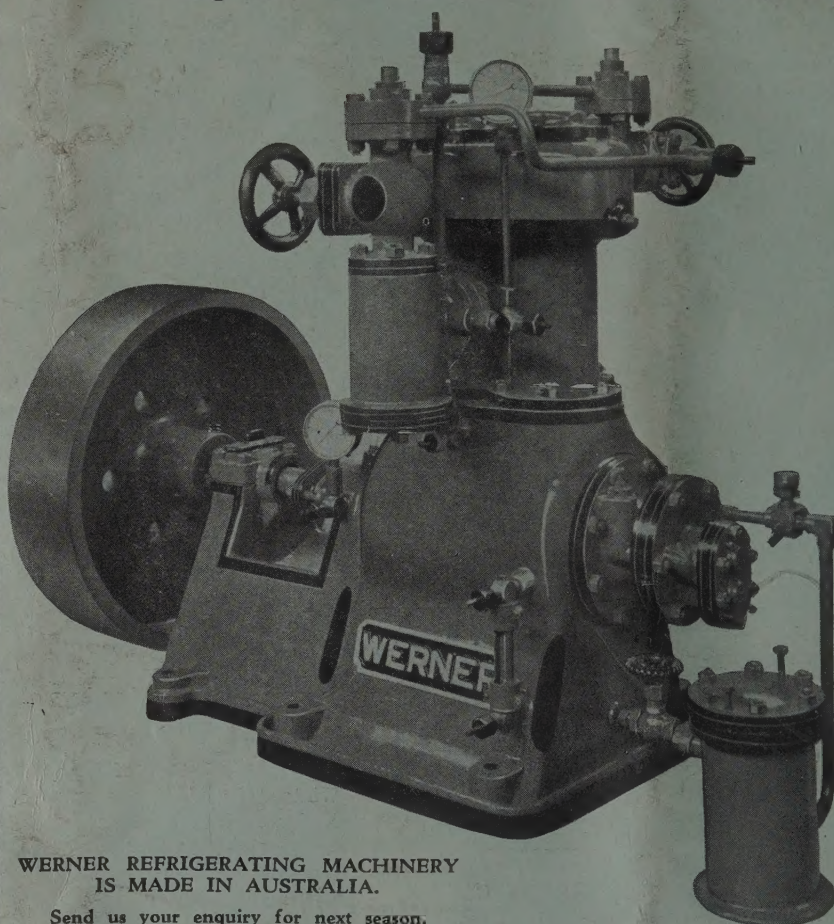
ful results must be carefully observed from the time that the pig is born to the time that it is marketed. Unfortunately, many pig farmers appear to be under the impression that the pig will thrive under whatever conditions it may be fed and on food which may be actually unwholesome.

The foods available (and there is a considerable choice of pig foods in New South Wales) must be so used that the animal is supplied with adequate material for growth and early maturity. A properly balanced ration is necessary, by which is meant that the nutritive constituents are associated in such proportions as to produce the results sought in feeding with little or no waste.

The foods available on most farms are quite adequate, but the way in which the animals are fed is the cause of many losses of young pigs. Pigs require to be fed from clean vessels and from clean troughs, free from crevices. The trough should preferably be of concrete built into a concrete floor.

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